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REPORT IV

**PREPARATORY ASIATIC REGIONAL CONFERENCE
OF THE INTERNATIONAL LABOUR ORGANISATION**

NEW DELHI, 1947

**The Economic Background of Social Policy
including
Problems of Industrialisation**

Fourth Item on the Agenda

**NEW DELHI
International Labour Office
1947**

PREFACE

“The Economic Background of Social Policy, including Problems of Industrialisation” forms the fourth item on the agenda fixed for the Preparatory Asiatic Regional Conference by the Governing Body of the International Labour Office. It is the purpose of the present Report to provide the Conference with a basis for the consideration of this complex and important subject.

The first Part of the Report seeks to describe the main characteristics of the economies of Asiatic countries. In four chapters it surveys successively the levels of income and productivity in these countries before the Second World War, and the characteristic features of their agriculture, their traditional industries, and their modern industry. Chapter V reviews the economic effects of the war.

The second Part of the Report attempts an analysis of the main problems involved in raising the present low levels of productivity and income. Chapter VI discusses the relation between poverty and the problem of population; Chapter VII, the various methods by which incomes might be raised; and Chapter VIII, some international aspects of economic development. Chapter IX summarises briefly the conclusions suggested by the preceding survey and analysis.

The crucial importance of economic development to social progress in Asia requires no emphasis. Incomplete as the present Report must be in its treatment of many aspects of this subject, the International Labour Office hopes that it will prove of assistance to the Conference in reaching clear conclusions on some at least of the issues involved in any effort to lay the economic foundations for higher living standards. It should be added that the Report was communicated in draft form to the Governments of Asiatic countries which will be represented at the New Delhi Conference. The observations made by the Governments have been taken into account as far as possible in preparing the Report for publication, and the valuable assis-

tance received from them in checking the facts and figures mentioned in the Report is hereby gratefully acknowledged. Some mention is also made of the findings of the Asian Relations Conference, which was convened by the Indian Council of World Affairs and met in New Delhi in March-April 1947.

The International Labour Office is indebted to the Government of India for the facilities which it provided for the printing of this Report, and to the Manager and staff of the Government of India Press, Simla, for the particular care they bestowed upon the work.

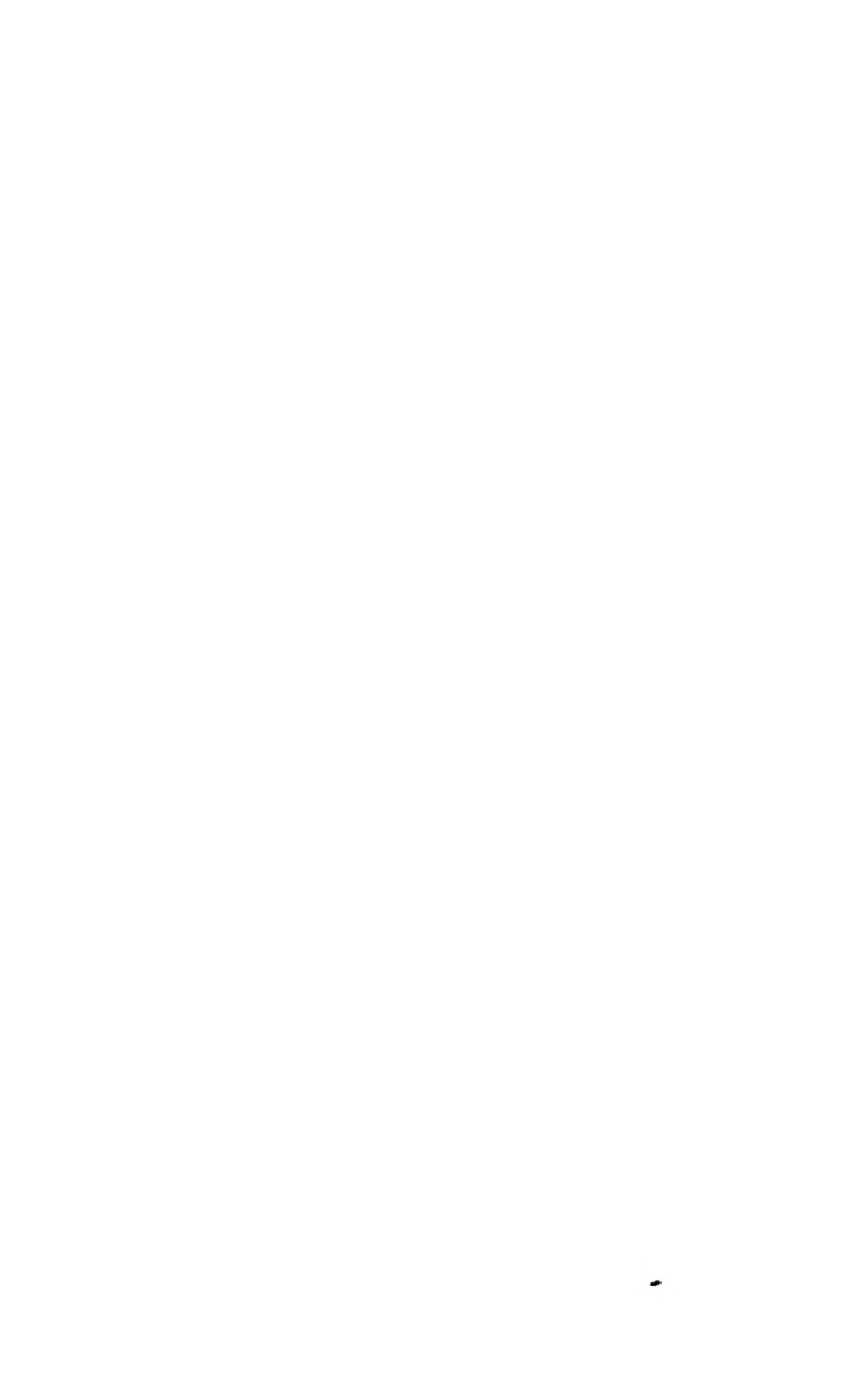
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Part I

CHARACTERISTICS OF THE ECONOMIES OF ASIATIC COUNTRIES



CHAPTER I

INCOME AND PRODUCTIVITY

REAL INCOME

The difference in the degree of economic development between Asiatic and western countries is clearly reflected in the great difference in average real income. It has been estimated that during the period 1925-1934 real income per head of the working population in most parts of the region covered by the present Report—in China, India¹, Siam, Ceylon, Indo-China, Indonesia², and Malaya³—averaged less than 200 "international units" a year, as compared with 1,000 units or more in the United States, the United Kingdom, Australia, Canada, and New Zealand, and 600-1,000 in western European countries.⁴ These estimates, though subject to a considerable margin of error, may be accepted as giving a rough quantitative impression of the wide disparity of living standards between the Asiatic countries of the Far Eastern region and the western world.

The dominant economic characteristic of the Asiatic countries in the Far Eastern region is their extreme poverty: the average real income of their population, about half the human

¹ Since the preparation of this Report, it has been decided to set up two Dominions in India in the area to which the Government of India Act, 1935, applied. The appointed date for the bringing into force of the Indian Independence Act 1947, by which this decision was implemented, is 15 August 1947.

² The term Indonesia as used in this Report refers, unless otherwise specified, to the territory of the former Netherlands Indies.

³ The Malayan Union, for convenience referred to as Malaya in this Report, was created on 1 April 1946, and comprises the former Straits Settlements, with the exception of the present colony of Singapore, and the former Federated and Unfederated Malay States. Where the information given relates to the period before 1 April 1946, the term Malaya refers to the territory of the Malayan Union and Singapore taken together.

⁴ An "international unit" is defined as "the amount of goods and services which one dollar would purchase in the United States over the average of the period 1925-1934" (Colin CLARK: *The Conditions of Economic Progress*, London, Macmillan and Co., 1940, p. 54).

race, is barely sufficient to maintain a minimum level of subsistence.

It is true that in the one country for which estimates are available the average level of income appears to be rising; but the rise is disappointingly slow. Real income per head in India has been estimated in terms of 1925-1929 purchasing power, at 44.2 rupees in 1867-68, 55.2 rupees in 1895, and 78 rupees in 1921-22 and also in 1925-1929. During the 61 years covered by these estimates, real income per head thus rose about 76 per cent., equivalent to an average annual rate of increase of nearly 1 per cent. Such a rate of progress is clearly too slow; for, as already noted, the present average income in India, though considerably higher than it was three quarters of a century ago, is still at or below the poverty line. If the rate of progress in the future is no better, it would probably take several generations to raise the economic well-being of the Indian population to a reasonable level. Though comparable statistics are lacking, the position in many other Asiatic countries appears to be similar.

The key objective of economic policy in Asiatic countries must be, therefore, to speed up the rate of growth in average real income. Because of the substantial difference between the present level of income and the minimum requirements of subsistence, not to speak of an adequate standard of living, means must be found to ensure that real income will increase more rapidly even than is the case in the most industrialised countries.

INCOME DISTRIBUTION AND THE STRUCTURE OF PRODUCTION

The difference in the level of real income between Asiatic and western countries can be traced to the differences in the structure of national production and employment. One main difference lies in the relative shares of consumption and capital formation in the total national income. Whereas in the western countries an appreciable portion of annual output (in the neighbourhood of one tenth) goes into the formation of capital assets designed to improve the productivity of the country, in Asiatic countries such capital assets form only a negligible portion of annual output, the bulk of which is absorbed by current consumption. This accounts for the marked difference in the levels of capital stock between the two groups of countries, which

itself goes far to explain the great difference in output and income per head.

One obvious explanation of the low rate of capital accumulation in Asiatic countries is that, as the income level in these countries is extremely low, people cannot afford to save. In fact, in order to survive, a large number have at times to resort to distress-borrowing to supplement their income, and thus live in a state of chronic indebtedness. This is, however, only a partial explanation, because for a country taken as a whole, saving depends not only upon the level of national income, but also upon its distribution among the population. The low average level of income in Asiatic countries does not mean that there is no social class with a high average income. While little precise information on income distribution is available, general observation suggests that in some of these countries the degree of inequality of income is quite high: there are certain social classes which, in striking contrast to the condition of the masses, enjoy a very high income and standard of living. In India, for instance, it has been estimated that more than a third of the national income goes to about 5 per cent. of the population and another third to the next 35 per cent., while the remaining third is shared among 60 per cent. Thus it would seem that, despite the low average level of income, certain groups of the population have been in a position to save a sizable portion of their annual income, which could be available for investment in productive capital assets. In fact, however, much of the savings of these high-income social classes has been spent on acquiring real estate and precious metals. An important part, moreover, has been lent to the distressed social classes, at exorbitant interest rates, for consumption purposes. Among the lower-income classes, such saving as does occur usually takes the form of the accumulation of idle cash balances and of ornaments and jewellery. The low level of productive capital stock in Asiatic countries is therefore not entirely due to the shortage of savings; it is due in part to the habits and attitudes of the savers, to the lack of adequate machinery for channelling savings into productive investment, and to the lack of a sufficient number of risk-taking entrepreneurs who are both willing and able to turn such savings into productive capital assets.

Another radical difference in the structure of national output and employment between Asiatic and western countries lies in the different division of national employment and output between primary, secondary, and tertiary industries. The contrast between these two groups of countries in this regard stands out sharply in table I, showing the occupational distribution of population in the Asiatic countries under survey and in seven of the world's highest-income countries. The figures for the Asiatic countries are only rough estimates, but it can be safely stated that in most of these countries over 70 per cent. of the population is engaged in primary production, as contrasted with 7 to 30 per cent. in the world's highest-income countries.

TABLE I. PERCENTAGE DISTRIBUTION OF THE GAINFULLY OCCUPIED POPULATION IN ASIATIC AND WESTERN COUNTRIES

Country	Year	Primary industries		Secondary industries	Tertiary industries	
		Agriculture, fishing	Mining	Manufacturing, handicrafts	Commerce, transport	Administration, domestic service
Asiatic countries :						
Malaya	1930	56	*	*	*	*
Ceylon ¹	1921	65	²	12	11	12 ³
Burma	1931	69	1	13	14	3
Indo-China ..	1930	71	*	*	*	*
India ⁴	1931	72	²	11	7	10
Siam	1930	72	*	*	*	*
Indonesia ..	1930	73	*	*	*	*
China	1930	70-75	*	*	*	*
Philippines ..	1930	76	*	*	*	*
World's highest income countries :						
United Kingdom ..	1930	7	5	32	23	33
Australia	1933	20	2	30	24	24
Netherlands ..	1930	21	2	36	23	18
Switzerland ..	1930	21	²	45	19	15
United States ..	1930	22	2	30	27	19
New Zealand ..	1936	28	²	24	26	22
Canada	1931	31	2	25	23	19

Source: For Burma, Census of 1931; for Ceylon, figures supplied by the Government of Ceylon; for the other countries, LEAGUE OF NATIONS: *Industrialisation and Foreign Trade*, 1946, pp. 26-27.

¹ Figures include dependants. ² Negligible. ³ Including "miscellaneous", 6 per cent. ⁴ Men only. * Figure not available.

The annual national income produced in Asiatic countries, therefore, consists mainly of primary products, and secondary and tertiary production represents only a very small share. In China, according to one provisional estimate, about 77 per cent. of the average national income of 35,200 million dollars¹ during the period 1929-1934, was derived from agriculture, 2 per cent. from modern industry, 17 per cent. from other trades and industries, and 4 per cent. from Government service. Total rural income in India in 1931-32 has been estimated at 12,200 million rupees (about 71 per cent. of the total national income) and urban income at 4,900 million rupees. According to an estimate of national income in Ceylon, 62 per cent. of the pre-war national income was derived from agriculture (including plantations and fishing), 25 per cent. from industry and commerce, and 13 per cent. from the services. In the Philippines, agriculture, stock raising and fishery together accounted for 77.2 per cent. of the national income in 1939, industry for 14.5 per cent., and mining for 8.3 per cent. For other Asiatic countries, similar estimates are unavailable. There can be no doubt, however, that the predominance of primary production is a basic feature of the economy of the whole Asiatic area under survey, and this fact, as will be presently shown, is causally related to the low real income per head of the population.

CONSUMPTION STANDARDS

The predominance of agriculture in the total output and employment of Asiatic countries reflects the pattern of consumption on which their national income is spent. It is, of course, by no means true that a country can consume only what it produces. A country engaging mainly in primary production can always trade part of its primary produce with the rest of the world for whatever consumption goods it requires. Australia and New Zealand provide outstanding examples of this type of international trade. What actually determines the pattern of consumption is the level of output and income. The all-important fact about Asiatic economy is not that the bulk of the population is engaged in agriculture, but that the

¹ Wherever the term "dollar" or the sign "\$" is used, it refers, unless otherwise specified, to the national currency of the country in question.

output and the income per head of the agricultural population are exceedingly small. In China, for instance, the average annual income per head of agricultural population during the period 1929-1934 roughly amounted to only \$73, as against \$416 per head for the population engaged in modern industry. Similarly, rural income in India in 1931-32 has been estimated at only 48 rupees per head, compared with 162 rupees for urban income. Because of the small output per head of the agricultural population, the bulk of agricultural output in Asiatic countries has to be retained for home consumption, with only a limited surplus left to exchange for other types of consumption goods from the outside world. For some parts of Asia, where primary production consists mainly of raw materials for industry instead of foodstuffs, for example, Malaya, exports of raw materials, though large in quantity, must be used in part to pay for imports of food. Imports of other consumption goods are again limited by the low level of income.

In all the Asiatic countries under survey the consumption expenditure of the masses follows a simple pattern: food absorbs the main share, and any income that remains is spent on other minimum necessities of life. A comparison of the percentage distribution of consumption expenditure of an average wage earner's family before the war in China, India, Burma, and Ceylon with corresponding figures for the United States, Denmark, and New Zealand is given in table II. It will be observed that the food item represented from 49.3 to 55.8 per cent. of the consumption expenditure of an average wage earner's family in the four Asiatic cities¹, as compared with only 29.5 per cent. in New Zealand, 36.7 per cent. in New York City, and 37.5 per cent. in Copenhagen. The proportions of income spent on housing and clothing were correspondingly smaller. The proportion absorbed by miscellaneous items seemed to be fairly high, but this is partly accounted for by the fact that a substantial part of the miscellaneous expenditure consisted of gifts and assistance, which in fact furnish a form of mutual aid in most Asiatic communities. It is also important to mention that the average income of wage earners in Asiatic countries during the period covered by the table was not, as a rule, sufficient to meet the necessary expenditure, and

¹ It has been estimated that before the war an average rural family in north China spent as much as 65 per cent. of its annual income on food.

TABLE II. PERCENTAGE DISTRIBUTION OF CONSUMPTION
EXPENDITURE OF AN AVERAGE WAGE EARNER'S FAMILY IN
ASIATIC AND WESTERN COUNTRIES

Country	Date	Food	Housing				Clothing	Miscellaneous
			Rent	Furniture, upkeep and equipment	Fuel and light	Total		
China (Shanghai)	1929-30	55.8	8.5	1.4	6.5	16.4	7.4	20.4
Burma (Rangoon)	1928	52.7	13.9	2.6	5.2	21.7	10.6	15.0
Ceylon (Colombo)	1939	52.4	16.0	—	6.3	22.3	8.3	17.0
India (Ahmedabad)	1933-35	49.3	11.0 ¹	0.4	6.6	18.0	9.1	23.6
Denmark (Copenhagen)	1931	37.5	15.1	6.1	3.9	25.1	11.3	26.1
United States (New York City)	1934-36	36.7	21.1	2.6	4.9	28.6	11.1	23.6
New Zealand	1930	29.5	21.9	1.5	6.2	29.6	12.6	28.3

Source: For Burma, J. J. BENNISON: *Enquiry into the Standard Cost of Living of the Working Classes in Rangoon* (1928); for Ceylon, figures supplied by the Government of Ceylon; for the other countries, "An International Survey of Family Living Studies: I", in *International Labour Review*, Vol. XXXIX, No. 5, May 1939, p. 691.

¹Including municipal taxes.

that consequently many families were in debt. For instance, for an average wage earner's family in Shanghai, the deficit amounted to no less than 8.3 per cent. of the annual expenditure. The proportion was much the same in Colombo.

Because of the meagreness of income earned by the working population in Asiatic countries, there is often little left over for essential services, particularly education and medical care.¹ According to the above survey, only 0.3 per cent. of the expenditure of an average wage earner's family in China was

¹In many Asiatic countries, e.g., Ceylon, medical care services are, in the main, provided free of cost by the State. For an account of these services, see the report on item I of the agenda: *Problems of Social Security*, Chapter VI.

devoted to educational purposes, and the proportion was also negligible in the case of Indian workers. Furthermore, under the pressure of poverty, children are compelled at an early age to seek work for whatever amount of income they can contribute to the family. It is often considered a real economic loss for the children to go to school, which partly explains the high degree of illiteracy in these countries. In India, for instance, the percentage of literacy above the age of 5 is today 14.6, compared with 80 or over in the more advanced western countries.

Proper medical services are also beyond the means of an average family. For a large section of the population, the treatment of disease means incurring a heavy debt and, consequently, is liable to be postponed until too late to be of much avail. This financial inability to obtain proper medical treatment, coupled with the scarcity of medical personnel and equipment and the low standards of nutrition, housing and sanitation, results in a shockingly high death rate and a low expectation of life. In India, for instance, the expectation of life for males at age 1 in 1931 was 35 years, compared with 65 years in Australia at about the same time. The Indian rate of infant mortality stood at the high level of 162 per 1,000 live births in 1937, compared with a rate of 39 per 1,000 in New Zealand (31 per 1,000 for the European population). In other Asiatic countries, though accurate vital statistics are not always available, the death rate is also known to be very high.

Since the income received by the bulk of the population in Asiatic countries is spent on food, clothing, and housing, it is of interest to note in some detail the pattern of consumption of these three items. First, as to food consumption, the common characteristic of the Asiatic countries in the Far Eastern region is that, in spite of the fact that three fourths of their population are engaged in agricultural pursuits, the total food supply in normal years is insufficient to provide a minimum balanced diet. The main deficiency lies in the supply of protective foods. In most Asiatic countries, the supply of cereals is not greatly below the minimum dietary requirements. The wide discrepancies between the quantities of various kinds of food that are available in India and the quantities required to supply a minimum standard for a balanced diet as recommended by nutrition experts are indicated in table III. It will be

noted that the present consumption of meat, fish and eggs, milk, fats and oils, and vegetables falls short of minimum dietary requirements.

TABLE III. FOOD CONSUMPTION IN INDIA

Food	Quantity in ounces per day per adult (or consumption unit)		Total quantity in million tons	
	Required for a balanced diet	Available	Required	Available
Cereals	18.0	17.5	54.0	52.5
Pulses	3.0	2.5	9.0	7.5
Sugar	2.0	1.8	6.0	5.3
Vegetables	6.0	3.0	18.0	9.0
Fruits	2.0	2.0	6.0	6.0
Fats and oils	1.5	0.6	4.5	1.9
Whole milk	8.0	1.5	32.0	6.3
Buttermilk ¹	—	3.0	—	12.5
Meat, fish and eggs ¹	2-3	0.5	6.0-9.0	1.5

Source: ADVISORY BOARD OF THE IMPERIAL COUNCIL OF AGRICULTURAL RESEARCH: *Memorandum on the Development of Agriculture and Animal Husbandry in India* (Delhi, 1944), p. 17.

¹ Per capita.

Even in the case of cereals, the normal supply of which is not much less than the required amount, it is estimated that a 10 per cent. increase in production will be necessary to make provision for lean years and for the increase in population. According to another estimate, the deficiency of India's food supply is about 17 per cent. in terms of calories, 38 per cent. in terms of proteins, and 64 per cent. in terms of fats, and even more in terms of vitamins.

Similar nutritional deficiencies exist in China. Average food consumption is very low. The estimated average for the pre-war period 1931-1935 in 22 Chinese provinces was only 352.1 kgs. per annum, in comparison with 477.7 kgs. in the United Kingdom and 529.4 kgs. in the United States.¹ Of the total Chinese food consumption, plant foods represented 96 per cent.

¹ It should be pointed out that these figures represent the bulk weight of food consumed, but do not indicate the difference in the comparative weights of dry matter contained in the food. This difference is smaller than the figures would suggest, since the Chinese diet includes a larger proportion of grains, and the water content of grains is relatively low.

in terms of weight, and animal foods (excluding eggs) only 4 per cent.; and of the total plant foods consumed, approximately 80 per cent. were cereals. The consumption of eggs amounted to 43 per head per year. These figures, though subject to a considerable margin of error, give clear enough evidence of the inadequacy of food consumption in China. While the findings of recent studies of Chinese nutrition tend to suggest that for the population as a whole there is sufficient caloric intake in normal times, there is an obvious insufficiency of protective foods, resulting in the incidence of numerous diseases traceable to malnutrition.

In regard to the supply of cereals in China and India, several other features need to be stressed. First, although in normal years the supply of cereals in these countries does not fall much below the minimum dietary requirements for the population as a whole, there is, nevertheless, a large section of the population whose cereal consumption is chronically less than the minimum requirements because of their extremely low income. Secondly, in spite of the fact that the productive effort of the bulk of the population is devoted primarily, if not exclusively, to the cultivation of cereals, these countries, even in normal times, import cereals from neighbouring countries, such as Siam and Burma, to make up the local deficiencies in food supply, which are due mainly to the lack of transport facilities for proper food distribution within the country. Finally, owing to the irregularity of rainfall, the poor irrigation system, and the ineffective methods of eliminating plant diseases and insect pests, such as locusts, crop failures are more frequent and far more severe in these countries than in western countries. This extreme variability of cereal crops, together with the meagreness of food stocks and lack of transport, account for the recurrence of famine in these lands. The food situation in China and India in 1946 brings fresh testimony to the seriousness of this fundamental aspect of Asia's food problem.

With regard to clothing, variations in climatic conditions and social customs make it difficult to appraise the standards of consumption in different Asiatic countries. For the region as a whole, the level of clothing consumption is exceedingly low. This is indicated by the negligible proportion of wool fibres in the textile consumption of these peoples. Average wool consumption is estimated (clean basis) at 0.1 lb. in China

and 0.2 lb. in India, compared with 4.55 lbs. in Belgium, 4.63 lbs. in Australia, 4.65 lbs. in New Zealand, and 5.27 lbs. in the United Kingdom. In other Asiatic countries, for which no figures are available, the *per capita* consumption of wool is at least equally small. The reason lies partly in the warm climate in many parts of Asia, but mainly in the fact that most consumers are too poor to buy woollen goods.

For the bulk of the population in Asia the major clothing material is cotton. Limited by low income, the average consumption of cotton goods in Asiatic countries is also small. It has been estimated that in 1929 the consumption per head of cotton piece-goods amounted to 10 linear yards in China, 16.1 linear yards in India, 12.1 linear yards in Ceylon, and 10.4 linear yards in Indonesia, as contrasted with 64 square yards in the United States, 37.7 linear yards in Canada, and 35 square yards in the United Kingdom.¹ It is likewise significant that, according to the same estimate, handloom production supplied as much as 7.1 yards of the cotton piece-goods consumed per head in China and 4.4 yards in India. The difference in the level of clothing consumption of Asiatic and western countries is of course greater than is suggested by these comparative figures, since cotton goods form only a part of the wardrobe of the western population, but constitute practically the entire wardrobe for an average family in most parts of Asia. Furthermore, it must be remembered that, owing to the inequalities of income distribution, there are large sections of the population in Asiatic countries whose clothing consumption falls far short of even the low figures cited above.

Finally, as regards the condition of rural and urban housing, comparable and accurate information is lacking for most of the Asiatic countries under survey. On the whole, the main characteristics are unmistakable; overcrowding and lack of sanitary facilities, as displayed, for example, by the living quarters of the Chinese industrial workers. More detailed information is available on the condition of rural housing in China, owing mainly to the exhaustive field investigations of Professor John Lossing Buck and his associates. A sample study of 402 farms

¹ A part of the difference in the *per capita* consumption of cotton piece-goods is attributable to the greater industrial use of coarse cotton fabrics in the advanced industrial countries (cf. INTERNATIONAL LABOUR OFFICE: *The World Textile Industry: Economic and Social Problems*, Studies and Reports, Series B, No. 27 (Geneva, 1937), Vol. I.

during the period 1929-1933 showed that the average housing space per person was 63.5 square feet on small farms and just over 100 square feet on medium-sized and large farms. The number of houses in India, according to the 1941 census, was 76 million: 10 million in towns and 66 million in villages. The existence of extreme overcrowding in industrial cities is illustrated by the fact that in Bombay Province the average floor space per person in industrial areas in 1938 was 26 square feet in Bombay City, 43 square feet in Ahmedabad, and 24 square feet in Sholapur. While similar information is not available for rural districts, the condition of overcrowding is known to be equally deplorable, if not worse. It has been stated that, although housing conditions in urban areas in Ceylon leave much to be desired, those in rural areas are satisfactory in comparison with other Asiatic countries. Most houses in rural areas in these countries are, however, extremely simple in character: walls are usually tamped earth or earth brick, and floors are mostly earth.

CAUSES OF LOW PRODUCTIVITY

These low standards of living are the inevitable accompaniment of the low output per head of the working population. The people of Asiatic countries are poor because the product of their labour is small. But why is the productivity of labour so low?

Broadly speaking, the productivity of labour in any country is determined by the following factors: (a) the quantitative relationship between the supply of labour on the one hand and the supply of land and capital on the other; (b) the methods of production; and (c) the skill and effectiveness of labour. The influence of each of these factors on the productivity of labour in Asiatic countries can be briefly summarised.

It is important to recognise at the outset that the productivity of labour depends not only upon its quality, but also upon the supply of land and capital with which it has to work. As a general rule, with any given supply of labour, the smaller the quantity of land and capital, the smaller will be the average output per unit of labour. This is the basic explanation of the low productivity of labour in Asiatic countries. As already mentioned, the two main features which distinguish the

structure of national income and employment of these countries from that of more advanced countries are, first, the great proportion of population which is dependent on the cultivation of land and, second, the negligible proportion of national income set aside for capital formation. For most of these countries the significance of the first feature lies not so much in the large size of the agricultural population *per se* as in its relation to the area of land under cultivation. Beyond a certain point, continuing increases in the number of people working on the same area of land *with the same methods of production* inevitably reduce the average output per head. Each successive increase in the amount of labour yields a smaller increase in total output. This is a manifestation of the well-known "law of diminishing returns". In Asiatic countries of the Far Eastern region this law has operated in its most acute form. One of the basic causes of the low productivity of labour in Asiatic countries, therefore, is simply that the agricultural population is excessive in relation to the area of land under cultivation. If the excess population could be shifted from the land to other occupations, or if more land with similar fertility could be made available, the average productivity of labour would be raised even without any change in the method of production. The various problems involved in the relationship of population to resources are discussed in greater detail in Chapter VI below.

Another important factor responsible for the low level of productivity in Asiatic countries, as revealed in the second main feature of the structure of their national income, is the small amount of capital stock per head of working population. It is a simple truth that the output produced by each unit of labour varies directly with the amount of capital it employs: the greater the amount of capital, the higher will be the productivity of labour. This has been amply demonstrated by the effects of the high rates of capital accumulation in raising productivity in western countries. The difference between the Asiatic and the western countries in this respect is most striking. In China, for instance, according to one recent estimate, modern industrial capital equipment in 1937 could be valued at roughly 3,800 million dollars (or only 2.47 U.S. dollars per head at the rate then current). This figure, it is true, does not include the accumulated capital stock of the traditional indus-

tries. Even if the latter could be taken into account, the total industrial capital per head would still be very small in comparison with what exists in the advanced industrial countries.¹ In other Asiatic countries, though similar estimates are not available, the levels of capital stock are probably not much higher than in China.

It is not possible here to discuss in detail the inadequacies of the existing capital stock as a factor of production in these countries. However, by way of illustration, a few general observations may be made on the lack of capital equipment in agriculture and industry. In regard to agricultural production, for some of the Asiatic countries, such as China, the type of capital equipment which is most urgently needed, and the lack of which has caused such tragic consequences, is the equipment and construction work required for water conservancy and flood control. Closely related to this is the lack of effective modern systems of irrigation and drainage. The absence of capital improvements has led to severe crop failures and recurrent famine. Antiquated and rudimentary farming implements and inefficient draught animals prevent farmers from making the best use of such land as they have. With these deficiencies in both quantity and quality of capital equipment, there is small wonder that agricultural productivity in Asiatic countries is low in comparison with that in western countries.

The shortage of real capital is equally serious in Asiatic industry. The most obvious indication is the limited number of modern factories established in Asiatic countries and the preponderance of handicraft industry and small-scale workshops in the manufacture of a wide variety of goods. Since the chief difference between modern factory methods and the handicraft method of production lies in the amount of capital equipment per worker, the very fact that handicraft is an important form of industrial production indicates how small an amount of capital equipment is at the disposal of the average industrial worker. This provides the main reason for the low productivity of labour in manufacturing industry in these countries. A striking illustration of the differences in output per worker as between industries with varying amounts of capital equipment is found in cotton weaving in India, as shown in table IV.

¹See below, Chapter IV, under "Extent and Structure of Modern Industry".

TABLE IV. COTTON WEAVING IN INDIA

Degree of capital intensity	Capital investment per worker (rupees)	Output per worker (rupees)	Ratio of capital to output	Amount of labour employed per unit of capital
Modern mill (large-scale industry)	1,200	650	1.9	1
Power loom (small-scale industry)	300	200	1.5	4
Automatic loom (cottage industry)	90	80	1.1	13
Handloom (cottage industry)	35	45	0.8	34

Source: P. S. LOKANATHAN: "Cottage Industries and The Plan", in *Eastern Economist* (New Delhi), 23 July 1943.

Among various types of capital stock that are scarce in Asiatic countries, the lack of modern transport deserves special emphasis. In an underdeveloped country, capital investment in transport—in railroads, highways, and waterways—usually produces a far greater productivity-raising effect than can be expected from the same amount of capital investment in most other industries. By widening the size of markets, developments in transport bring about a higher degree of inter-regional specialisation and, consequently, a fuller and better utilisation of the country's human and natural resources, and enable agricultural and industrial enterprises to be conducted on a larger scale, to which more efficient methods of production can be applied. In most Asiatic countries the existing means of transport fall far short of what is needed for the full realisation of the advantages of inter-regional specialisation. Take, for instance, the mileage of railways. China (including Manchuria) before the war had only 45 kilometres of railways per million of population. The figure for the Indian provinces was 282 kilometres per million, for Burma 267, and for Ceylon 244. These figures, though considerably higher than that for China, were still very low compared with 3,200 for the United States, 1,004 for France, 884 for Germany, and 754 for the United Kingdom. The inadequacy of transport systems in various

Asiatic countries is brought out by the statistics in table V, showing for each country the number of square miles of territory to each mile of railway and of highway, and the amount of freight carried per mile of railway. (It should be remembered however that water transport, for which no statistics are available, is also of considerable importance.) Because of the inadequacy of transport, there exist only local markets for most products, and regional self-sufficiency, though gradually diminishing in degree, remains a characteristic feature of the Asiatic economy. Under such conditions a bumper crop is not always an unmixed blessing for the farmer: because of the limited size of the market, it leads to a fall in the prices of farm products; this may reduce his cash income; and thus he has little incentive to increase his productivity.

TABLE V. TRANSPORT FACILITIES IN FAR EASTERN COUNTRIES AND IN THE UNITED STATES

Country	Year	Area per mile of railway (square miles)	Freight carried per mile of railway (1,000 short tons)	Year	Area per mile of highway (square miles)
China (excluding Formosa and Manchuria)	1935-36	660.5	6.3	1939	75.7
Formosa ..	1938	6.3	6.1	1939	1.3
Manchuria ..	1939	80.9	9.0	1939	27.1
India ..	1945-46	39.0	2.8	..	*
Siam ..	1938	97.1	0.9	1940	45.5
Burma ..	1942	97.5	*	1942	47.7
Ceylon ..	1946	27.7	1.9	1946	3.9
Indonesia ..	1938	51.4 ¹	2.4	1939	17.2
Indo-China ..	1938	136.4	0.8	1938	16.8
Malaya ..	1938	47.9	1.9	1939	7.6
Philippines ..	1938	136.9	2.6	1938	9.6
Australia ..	1938	106.3	1.4	1939	6.1
New Zealand ..	1939	31.0	2.5	1937-38	2.0
United States ..	1938	7.2	4.7	1938	1.0

Source: For all countries except India, Burma, and Ceylon, Katrine R. C. GREENE and Joseph D. PHILLIPS: *Economic Survey of the Pacific Area, Part II: Transportation and Foreign Trade* (New York, Institute of Pacific Relations, 1942), pp. 10 and 12; for India, GOVERNMENT OF INDIA, RAILWAY DEPARTMENT (RAILWAY BOARD): *Report by the Railway Board on Indian Railways for 1945-46*, Vol. II, pp. 8 and 13; for Burma and Ceylon, figures supplied by the respective Governments.

¹ Based on the area of Java, Madura and Sumatra.

* Figure not available.

Different proportions of capital and labour employed in the productive process usually involve different methods of production with different degrees of efficiency. Obviously, the small ratio of capital to labour is a main factor explaining the continued use of inefficient methods of production in Asiatic countries. However, it is necessary to point out that, apart from the scarcity of capital equipment, there are a number of other factors contributing to the inefficiency of Asiatic methods of production and hence to the low productivity of labour. These factors have to do with social tradition, the limited knowledge of production techniques and organisation, and the limited application even of such modern techniques as require little capital expenditure.

Take again the case of agriculture. Investigations of farm management in Asiatic countries suggest that low agricultural productivity is attributable not only to the small size of holdings (the land factor), and the primitive farm equipment (the capital factor), but also to many other elements of inefficiency in methods of cultivation. Among these elements are the fragmentation and scattering of holdings, the haphazard selection of seeds, the deficiency of manures resulting from defective methods of preservation, the inadequate knowledge of pest and plant disease prevention, and the poor methods of cattle breeding. Furthermore, there appears to be a lack of interest on the part of the farm population in methods of improving productivity.

The same may be said about the inefficiency of industrial production in these countries. Leaving aside handicrafts, it is a notable fact that for similar types of products the level of productivity attained by modern industries in these countries is far below that of western countries. For instance, in India the productivity of labour in modern cotton spinning mills (up to 40 counts) in 1932 was approximately only 1 lb. of yarn per man-hour, compared with 5.6 lbs. in the United States, 4.5 lbs. in the United Kingdom, and 4.3 lbs. in Germany. It would clearly be a mistake to ascribe such differences in productivity entirely to differences in capital equipment. In fact, in the above-mentioned instance, the types of mechanical equipment used are essentially similar. Inadequate knowledge of technical and manufacturing processes, inefficient methods of factory management, and the conservative outlook of investors

and entrepreneurs are more important in explaining low productivity in even these well-equipped industries. As a concrete illustration it may be noted that few modern firms in Asiatic countries have adopted adequate systems of cost and production control, which contribute in no small measure to the improvement of industrial efficiency in western countries.

As to the quality of labour, it must be emphasised that as far as intrinsic qualities are concerned, the Asiatic worker is in no wise different from his western counterpart. Diligence and ability to make the best of any given situation are among his outstanding traits. His intelligence is widely recognised. The skilfulness of Asiatic handicraft workers is fully proven by the fine artistic quality of the products they turn out. The speed with which Asiatic workers pick up a complicated process of industrial technique has also elicited the admiration of western observers. As the Labour Investigation Committee of the Government of India observed in its *Main Report* (published in 1946), "granting more or less identical conditions of work, wages, efficiency of management and of the mechanical equipment of the factory, the efficiency of Indian labour generally is no less than that of workers in most other countries"; and the same is true in other Asiatic countries.

There are, however, certain factors which tend to reduce the effectiveness of Asiatic labour. One is poor health resulting from undernutrition, malnutrition, and disease. Another is the lack of opportunity for proper education and for adequate technical training. Such handicaps to efficiency are rooted in the poverty of the people, in bad conditions of work and low wages. Once their living standards are improved, their productive efficiency is bound to rise. Moreover, the efficiency of labour in some Asiatic countries is unfavourably affected by climatic conditions. Lastly, factory workers are recruited mainly from agriculture and handicrafts, where habits of work are radically different. They are not accustomed to the kind of mechanical work which requires continuous manual operations and prolonged, concentrated attention; consequently, attendance on high-speed machinery appears to wear them out more easily than workers in countries with a long-established industrial tradition. This difficulty will gradually disappear as they become more used to working in factories.

To sum up, the low productivity of labour in Asiatic countries may be attributed to four different but closely related causes. The first major cause is population pressure—the high ratio of farm population to land under cultivation—which, through the operation of the law of diminishing returns, results in a low average output per unit of agricultural labour. The second major cause is the low level of capital stock available in these countries for productive purposes. The third is inefficiency in methods of production due to factors other than shortage of real capital. Finally, in certain lines of productive activity the effectiveness of labour is relatively low as a result of the poverty of the people, illiteracy, the absence of an industrial tradition, the lack of training in mechanical skills, and, in some cases, an enervating climate. To improve the living standards of Asiatic populations requires an organised attack on all these causes of low productivity.

CHAPTER II

AGRICULTURE

The economies of the Asiatic countries, while having certain basic characteristics in common, are dissimilar in many important respects, owing to differences in natural resources, in culture, and in political status. Consequently, the policies which should be pursued for their economic development are bound to be different. In regard to agriculture—the subject of the present chapter—the common features of the rural economies of Asiatic countries were reviewed in some detail by the recent Asian Relations Conference, to which reference is made in the preface to this Report. Representatives of over 25 Asiatic countries participated in the Conference, the findings of which are consequently of particular interest. These findings, so far as the fundamental similarities of the existing agricultural conditions of Asiatic countries are concerned, are set out in the first chapter, dealing with the primary producer, of the Office report on item II of the agenda of the present Conference¹, and are therefore not repeated here. In the following pages some of the dissimilarities between the different countries will be illustrated in detail.

FEATURES OF LAND UTILISATION

Since the mass of the population in Asia depends on the land for livelihood, it is appropriate to begin with a description of the main features of land utilisation in these countries, especially the availability of cultivable land, types of land use, kinds of agricultural produce, and modes of cultivation and land conservation. Full information on these matters is not always available and on some features only general observations can be made.

¹ *Labour Policy in General, including the Enforcement of Labour Measures*, pp. 41-42.

Land under Cultivation

Among the most important questions to be considered are the following: How much land is actually under cultivation? What is the area of cultivated land per head of population? Is it sufficient to yield a properly balanced diet? How much cultivable land still remains uncultivated and what difficulties are likely to be encountered in reclaiming such land? What is the position in Asiatic countries compared with other countries?

Part of the answer to these questions is indicated in table VI. As the figures show, the area under cultivation in nearly all Asiatic countries is very small in relation to present population. Cultivated land per head in the area under consideration ranges from 0.4 acres in Ceylon to 1.3 acres in Burma, in sharp contrast to the 12 to 14 acres per head in the food-exporting countries of Australia, Canada, and New Zealand. It should be noted, however, that the area of cultivated land per head in France, Germany, Italy, and the United Kingdom is much the same as in the Asiatic countries of the Far Eastern region, while the area per head in the United States and the U.S.S.R. is not very much greater.

The ratio of cultivated land to population in Asiatic countries is important in relation to both nutrition and income. Its relation to levels of nutrition needs to be fully stressed and will be considered first. The relation of the land-population ratio to farm economies will be discussed later in connection with the size of land holdings and the degree of population pressure.

As has been previously mentioned, food production in most Asiatic countries is at present far from sufficient to meet the minimum nutritional requirements of the population as a whole. Since the low level of food production is largely due to the small area of cultivated land per head, the question immediately arises whether there is enough cultivable but as yet uncultivated land available in these countries to enable output to be raised to a level that would provide a properly balanced diet for the masses of the population. In other words, is the agricultural potential of these countries such as to enable them to be self-sufficient in regard to food supply, not only at the present low consumption level, but at an adequate standard of nutrition?

TABLE VI. LAND AND POPULATION IN ASIATIC AND OTHER COUNTRIES

Country	Year	Popu- lation	Land				
			Gross area	Culti- va- ble area	Cultivated land		
					Area	Percent- age of gross area	Per hea d of popula- tion
		millions	million acres			%	acres
Asiatic coun- tries :							
China ..	1939 ¹	450.0	2,867.0	482.0	331.0	11.5	0.7
India ..	1941	389.0	1,000.0	612.0	362.0	36.2	0.9
Siam ..	1937	14.4	128.0	*	12.3	9.6	*
Burma ..	1941	16.8	148.2	69.6	22.5	15.2	1.3
Ceylon ² ..	1946	6.6	14.8	3.6	2.7	18.2	0.4
Indo-China ..	1936	23.0	182.3	*	14.8	8.1	0.6
Indonesia :							
Java and Madura	1930	41.7	*	27.0 ³	20.7	*	0.5
Outer Pro- vinces ..	1930	19.0	*	139.3 ⁴	*	*	7.3 ⁵
Malaya ..	1937- 38	5.1	*	*	5.0	*	1.0
Philippines ..	1937	16.0	*	39.5	15.6	*	1.0
Other countries :							
Australia ..	1939	7.0	1,903.7	384.0	52.2	2.7	13.0
Canada ..	1940	11.4	2,364.7	351.8	163.8	6.9	14.3
France ..	1936	41.9	136.1	*	50.1	36.8	1.2
Germany ..	1939	69.6	116.2	70.5	*	60.7 ⁶	1.0 ⁶
Italy ..	1936	43.0	76.6	*	32.1	41.9	0.7
New Zealand	1936	1.6	66.5	*	19.0	2.8	11.6
United King- dom ..	1931	46.2	60.3	32.0	*	53.2 ⁶	0.7 ⁶
United States	1940	131.6	1,934.3	987.0	359.0	18.5	2.7
U. S. S. R. ..	1939	170.4	5,232.6	1,497.1	338.1	6.5	2.0

Source: For all countries except India, Burma, Ceylon, Indonesia, Malaya, and the Philippines, YANG Shu-chien: "Fundamental Problems of Chinese Agriculture", in *National Reconstruction* (New York, China Institute in America, 1944), Vol. V., July 1944, p. 41; for India, *Memorandum on the Development of Agriculture and Animal Husbandry in India*, op. cit., p. 15, and Census of 1941; for Burma and Ceylon, census figures supplied by the respective Governments; for Indonesia, Malaya, and the Philippines, Karl J. FALKNER: *An Economic Survey of the Pacific Area*, Part I: *Population and Land Utilization* (New York, Institute of Pacific Relations, 1941), pp. 3, 127, 142, 148-149.

¹ This date refers only to the estimate of population, taken from *Statistical Year-Book of the League of Nations*, 1942-44, p. 16; no date is indicated in the above-mentioned source for the figures for land. ² The figures for land are for 8 out of the 9 provinces, comprising 91 per cent. of the total area. ³ Total land excluding forest land, settlements, roads and inland waters. ⁴ Total land excluding forest land. ⁵ Cultivable area, as shown, per head of population. ⁶ The figure refers to the cultivable area.

* Figure not available.

This is a long-range question, to which no definite answer can be given without detailed quantitative investigation into all the aspects of land utilisation and the possibilities of increasing agricultural output in each of the countries concerned. However, some general observations may be offered on the availability of cultivable land in these countries. In so far as space is the ultimate determining factor in agricultural production, it is possible to estimate very roughly the area of cultivable land needed to yield a properly balanced diet per head at a given level of agricultural efficiency. According to one expert, "it takes about two acres of land [per head] to provide the diet of western countries at western levels of agricultural efficiency".¹ If this estimate is at all near the truth, it carries far-reaching implications for some of the Asiatic countries.

The amount of land in China which is cultivable but still uncultivated is extremely limited in relation to the size of the population. In the districts of the 22 provinces covered by Professor Buck's survey, it was estimated that the additional area that could be brought under cultivation was no more than 10 per cent. of the existing crop area. In China as a whole, according to the rough estimate given in table VI, there are approximately 150 million acres of cultivable land still uncultivated; but this estimate has been criticised as much too optimistic. Even on the basis of this optimistic figure, however, the total area of cultivable land would still amount to only about 1 acre per head. In India, cultivable land is estimated at 1.57 acres per head, which is substantially higher than in China but still much below the two-acre requirement. In several other Asiatic countries, the supply of land is much more abundant relative to population. The estimate of cultivable land per head in Burma, for instance, is 4.14 acres (1941 figure). In the Philippines, it is about 2.4 acres. While the cultivable area in Java and Madura is notoriously small, there is a considerable reserve of potential agricultural land in the Outer Provinces of Indonesia. These estimates, though subject to a considerable margin of error, suggest that as levels of nutrition rise, the degree of self-sufficiency in food

¹ P. Lamartine YATES: "Food Crisis and the Far East", in *Far Eastern Survey*, Vol. XV, No. 13, 31 July 1946 (New York, American Council of the Institute of Pacific Relations), p. 227.

supply must vary greatly from country to country within the region, and is likely to be relatively low in the two countries—China and India—which contain the bulk of the population.

It is interesting to note that the agricultural potential of China, in terms of cultivable land per head, is comparable to that of the western European countries, notably France and Germany. It is only the difference in average levels of income that accounts for the fact that while the countries of north-west Europe have now become the leading food-importing countries in the world, China still subsists on its own production of food, except to the extent that imports are brought in to make up for crop failures or for local deficiencies due to lack of transport. If the nutrition of the Chinese population is to be raised to a level comparable to that of the western European countries, it seems likely that China will have to rely upon imports for a substantial portion of its food supply, even if the internal transport system is developed, agricultural efficiency greatly improved, all cultivable land brought under cultivation, and full use made of the extensive grazing lands in the north-western provinces. In order to pay for the increased food imports that will be required, China will clearly have to expand its exports.

India has more uncultivated cultivable land at its disposal and hence will probably depend less than China upon imports for the provision of an adequate diet. However, the bringing of additional land under cultivation would involve large sums of capital expenditure, and consideration would have to be given to the question whether it would be more economical to devote this capital expenditure to land reclamation or to the expansion of exports with which to purchase food from abroad.

In some Asiatic countries there seems to be sufficient cultivable land to enable them to produce their own requirements of food even at a high nutritional level. In Siam and Burma, agricultural output could probably expand to such an extent that, besides providing an adequate diet for the home population, there would be a sizable surplus available for export.

Needless to say, the question whether self-sufficiency in food supply at high nutritional levels will be a desirable aim will depend not only on the amount of cultivable land available, but also on the relative profitability of such land in the different competing uses to which it may be put. In certain Asiatic

countries large portions of the crop area are devoted to, and are particularly suited for, the production of certain industrial raw materials; Indonesia and Malaya are cases in point. For these countries it may be advantageous, provided the terms of trade are sufficiently favourable, to expand primary production for export and to meet their increased food needs through imports.

Types of Agricultural Products

In some Asiatic countries the distinguishing feature of the existing pattern of land use is the small part played by animal husbandry. In China, except in the north-western provinces, the proportion of cultivated land used for pastoral purposes is almost negligible. This is also true of Indo-China and of some other densely populated Asiatic countries. "It is a question, not of climate or soil, but of resources and population. The relation between them has for many centuries been such that land capable of growing food for human consumption cannot be spared for raising beasts. Milk and meat will support fewer human beings than can be fed from the land which, if cattle were reared, would be required to grow fodder."¹ In India, however, the livestock industry plays a much more important role in primary production. According to the cattle census of 1935 and estimates for the areas not covered by the census, India possesses approximately 230 million cattle, or about a third of the world's recorded number.

As regards the various types of agricultural products, marked differences exist between the region comprising China, India, Siam, Burma, and Indo-China (eastern Asiatic region), on the one hand, and the more tropical region comprising Ceylon, Indonesia, Malaya, and the Philippines, on the other. Whereas in the former region, crops are grown primarily for food for direct human consumption, cereals being of first importance, in the latter region a considerable portion of agricultural land is devoted to the cultivation of tropical products, which consist partly of industrial raw materials and partly of non-cereal foodstuffs. This difference in the nature of agricultural production also explains the difference in the degree of dependence

¹ R. H. Tawney: *Land and Labour in China* (London, Allen and Unwin, 1932), p. 27.

upon external markets for the disposal of agricultural products. In the eastern region most of the agricultural output, except for a few crops, is retained for home consumption. In the tropical region, on the other hand, a large proportion of agricultural output is produced almost exclusively for external markets. In consequence, as will be seen later in this chapter, the economies of this region are far more sensitive to the cyclical fluctuations and secular economic changes in the rest of the world.

The relative importance of various agricultural products in the eastern Asiatic region may be briefly indicated. According to Professor Buck's estimate, in China (excluding Manchuria), cereals, which consist mainly of wheat and rice, and partly of barley, millet, kaoliang and maize, occupy nearly 70 per cent. of the crop area; legumes and oilseeds account for a further 15 per cent., fibres for 3.6 per cent., tubers and roots for 3.3 per cent., vegetables for 1.1 per cent., tree crops for 1.1 per cent., fruits for 0.9 per cent., and all other crops for 4.4 per cent. Of the total crop area in Korea, rice constitutes 26.8 per cent.; barley, 17.9 per cent.; millet, 15.1 per cent.; wheat, 5.6 per cent.; and soybeans and other beans, 18 per cent.

Food crops in India cover about 81 per cent. of the total area under cultivation, and non-food crops about 19 per cent. The figures for acreage and production of the leading food crops in 1938-39 are as follows: rice, 73.3 million acres (23.9 million tons); wheat, 35.3 million acres (9.9 million tons); jowar, 33.8 million acres (6.4 million tons); bajra, 17.2 million acres (2.5 million tons); pulses, 17.2 million acres (2.5 million tons); fruits, 3.4 million acres; and sugar cane, 3.1 million acres (43.1 million tons). India is also one of the world's largest tea producers. The total tea acreage in 1939 was about 832,600 acres, with a total production of about 451.8 million lbs., of which 370.9 million lbs. were exported.

Among non-food crops, the most important are cotton and jute. In 1938-39, raw cotton occupied 23.4 million acres, with a total yield of 5 million bales of 400 lbs., about half of which were exported; and jute (India's most remunerative agricultural product, in which the country virtually holds a world monopoly) occupied 3.1 million acres, with a total production of 9.6 million bales, of which Bengal alone produced about 90 per cent. The principal other non-food crops are oilseeds,

tobacco, and rubber. The rubber output is, however, fairly small compared with that of other countries.

The agriculture of Siam, Burma, and Indo-China may be characterised as a rice monoculture. In Siam and Indo-China, rice represents 94 per cent. and 82 per cent. respectively, of the total crop area. Besides rice, these two countries also grow such tropical products as coconuts, rubber, and coffee. In Indo-China, rubber production is of special importance; it amounted to 73,000 long tons in 1940, making Indo-China the world's third largest rubber producer. In Lower Burma, south of Thayetmyo and Toungo, rice is practically the only crop under cultivation. Upper Burma, on the other hand, is noted for the variety of its crops. In addition to its rice crop, Upper Burma produces sesamum, cotton, groundnuts, tea, and sugar cane. All three countries are rice exporting countries. During the decade 1930-1940 their total exports of rice averaged 6,300,000 tons a year, of which Burma provided more than half. The greater part of these exports was shipped to India, Ceylon, continental Europe, and the United Kingdom.

Rice still holds the most prominent place among the crops of the Philippines, although agricultural production is more tropical in character than in the above-mentioned Asiatic countries. Of the total crop acreage in 1938, rice occupied 43.3 per cent., maize 15.9 per cent., coconuts 14.6 per cent., abaca 11.5 per cent., sugar cane 5.2 per cent., bananas 2.1 per cent., tobacco 1.7 per cent., and other crops 5.8 per cent. Since 1910 there has been a steady increase in the area under all major crops, except abaca, which remained more or less stationary.

It has been estimated that of the total area under cultivation in Ceylon, 31 per cent. is devoted to rice and other food crops, 31 per cent. to tea and rubber, 32 per cent. to coconuts, and 6 per cent. to other export crops (cocoa, cardamom, cinnamon, citronella, areca nuts, and palmyra). In 1939, imports of rice amounted to 592,780 tons, or over three times the estimated local production.

Though one of the world's largest exporters of tropical products, Indonesia has a greater proportion of acreage under food crops for local consumption than Ceylon. In Java and Madura, about 59 per cent. of the gross area is cultivated by smallholders, primarily for food crops for local consumption, and

only 7.7 per cent. is occupied by plantations devoted to export crops. In 1938, of the total crop area cultivated by small-holders in these two provinces, rice accounted for 45.1 per cent., maize for 22.9 per cent., root crops for 14.4 per cent., pulses for 9.5 per cent., tobacco for 1.7 per cent., and other crops for 6.3 per cent. However, owing to the exceptionally high density of population, the rice production of these two provinces, large as it is, still fails to cover the entire home needs. In normal years a small proportion of this rice consumption (5.5 per cent. of the 1925-1929 average and 3.8 per cent. of the 1930-1934 average) has to be met by imports from abroad. No estimates are available regarding the extent and distribution of subsistence agriculture in the Outer Provinces, but judging from the relatively small population the area under food crops for local consumption would appear to be much smaller than in Java and Madura.

While rubber is the leading export crop in Indonesia, other tropical products are also of great importance. This is indicated by the following distribution of the principal plantation crops in 1938: rubber, 596,000 hectares; tea, 138,000 hectares; coffee, 104,000 hectares; oil palms, 90,000 hectares; sugar, 91,000 hectares; coconuts, 50,000 hectares; tobacco, 42,000 hectares; and other crops, 79,000 hectares. Since the depression of the early 'thirties, economic forces have brought about significant long-term changes in crop area for several of the tropical products. Compared with the 1925-1929 average, the sugar area had in the late 'thirties been curtailed by as much as 46 per cent. and the coffee area by 15 per cent. The area under oil palms, on the other hand, had more than doubled. The average area under rubber increased during the period 1930-1934 to about 20 per cent. over the 1925-1929 average, but remained stationary later in the 'thirties. The total plantation crop area in Indonesia is about evenly divided between Java and Madura and the Outer Provinces: in 1938 the former had 598,000 hectares and the latter 573,000. There are, however, considerable variations in the distribution of individual plantation crops between the two regions. All the sugar and most of the coffee, tea, tobacco, and cinchona are grown in Java; and very nearly all the oil palms and manila hemp, most of the coconuts, and a large proportion of the rubber are cultivated in the Outer Provinces.

The agricultural products of Malaya are also predominantly tropical. Of the total crop area in 1938, rubber plantations took up 64.7 per cent., coconuts 12.1 per cent., and rice only 14.3 per cent. The remaining 9 per cent. of crop area was distributed among other tropical products, *e.g.*, oil palms, pine-apples, areca nuts, tapioca, and bananas. There is thus little diversification in Malayan agriculture; by far the greater part of the cultivated area is devoted to export crops and only a small part to food crops. Rice production in 1937 met only about one third of the country's requirements. A large proportion of the country's food consumption is supplied by imports, which include not only rice but other essential food products, such as sugar, meat, dairy products, poultry, eggs, tea and coffee.

Intensive Farming and Soil Erosion

The area of land available in relation to the population determines to a large extent the methods of cultivation in use in the Asiatic countries. As a result of the shortage of cultivated land and the preponderance of agricultural population, intensive farming is predominant—intensive, however, only in the sense of an exceedingly large amount of labour applied per unit of land, and not in the sense of a high ratio of capital to land. Most of the work on the farm is done by hand, and modern machinery is virtually unknown. This type of cultivation is in marked contrast to the large-scale mechanised farming prevalent in such countries as Australia and New Zealand. In some Asiatic countries, *e.g.*, China and Java, land is seldom given any rest. In China, according to Professor Buck's survey, about 2.4 per cent. of the crop area was found to be lying fallow in the wheat region, and only 0.3 per cent. in the rice region. The percentage of fallow land is considerably higher in India. Double cropping is extensively practised in many Asiatic countries. For instance, in China about 66 per cent. of the crop area in the rice region and 27 per cent. in the wheat region, and in Indo-China about 54 per cent. of the cultivated area of Tonkin, are double cropped. Double cropping is also common in Ceylon and parts of India and Indonesia.

Another feature of land utilisation in most Asiatic countries is the importance of irrigation, particularly for the cultivation

of paddy rice. This is especially true in India, where water supply is extremely irregular owing to the uncertainty of rainfall; it is estimated that the production of irrigated crops per acre is on an average 50 to 100 per cent. higher than that of unirrigated crops in the same locality. In China, in the early 'thirties, irrigated land formed about 69 per cent. of the crop area in the rice region and 15 per cent. in the wheat region. In Java and Madura, "sawahs" or irrigated fields accounted for 52.3 per cent. of the total crop area cultivated by smallholders. Only a small number of farms in the Philippines have recourse to irrigation.

Finally, it is essential to mention the close causal relationship between the scarcity of cultivated land and the secular changes in the productive capacity of land in some of the Asiatic countries. The continuous unplanned search for land by the agriculturists, under the pressure of a rapidly growing population, has resulted in extensive deforestation, which encourages flood and soil erosion. In China, for instance, forests have been steadily destroyed by the peasants because of their need for fuel and additional land. While the consequences of erosion have been limited by the numerous terraces, notably in the rice region of China, deforestation is a basic cause of the recurrent floods of the Yellow River, with all their disastrous consequences. In the tropical parts of Asia, soil erosion is known to have impoverished large areas. One expert states:

In the Far Eastern colonies, French Indo-China, the Netherlands East Indies, etc., we can find numerous examples of the great damage to the soil and to estates by erosion, due either to bad usage of the soil by the most dangerous form of cultivation (shifting) or to the deforestation of extensive regions in order to raise crops of sugar cane, rubber, etc., or finally to the destruction of the forests in the interest of mine development, land clearing, bush fires and grazing.¹

THE SIZE OF FARMS

The most significant single characteristic of the agriculture of many Asiatic countries, as will be seen presently, is the small size of farms, a farm being defined here as a unit of agricultural enterprise operated by the cultivator together

¹ E. P. STEBBING: "Note for Commission Set up to Study Deforestation and Erosion", in *Journal of the Royal African Society*, Vol. 42, No. 166, Jan. 1943, p. 23.

with members of his family and hired labour. The average size of farms in southern and eastern Asia is extremely small. This is an inevitable consequence of the fact that three fourths of the population has to live on a limited total supply of cultivated land. More important still is the tendency in some parts for the size of farms to become smaller and smaller as a result of successive increases in rural population and of the repeated subdivision of holdings under inheritance laws entailing the equal partition of property among heirs.

According to a recent report, the average size of farm for China as a whole is about 5 acres. There are, however, marked regional differences. For instance, the average for Kwangtung and Kwangsi provinces is less than 2 acres, and the average for Fukien, Chekiang, and Kiangsi provinces is slightly more than 2 acres. It is larger in north China, where land is less fertile.¹ Professor Buck's survey, which was conducted during the period 1929-1933 and covered 16,786 farms in 168 localities in 22 provinces, put the average size of farm for China as a whole at 4.17 acres. The average size for the farms in the rice region was 3.9 acres, as against 5.63 acres in the wheat region. Farms worked by owners were, on the average, slightly larger than those worked by tenants, the respective averages for China as a whole being 4.22 acres and 3.56 acres. Another feature revealed by this survey was the positive correlation between the size of farms and the size of households. For instance, for farms of 13 acres, the average household was 10.1 persons. As to secular changes in the size of farms in China, extensive investigations have not yet been made. Such limited evidence as is available indicates a downward trend. A survey of 150 farms in Yenshan county in Hopei province showed a decrease of 14.3 per cent. in the size of farms in a period of 13½ years, and this although about 13 per cent. of the population of the present generation had migrated.²

Small farm holdings, and the process of repeated subdivision, prevail also in India. The average size of holdings in several provinces is under 5 acres. There are, however, substantial

¹ Figures given by the U. S. Nanking Agricultural Mission (*New York Times*, 8 Nov. 1946).

² For particulars on the size of holdings in China in 1944, see the report on item II, *op. cit.* (p. 13), to which reference may also be made in regard to the size of holdings in Siam, Burma, Ceylon, and Indo-China (pp. 13-15).

variations among different localities. According to the census of 1921, the number of cultivated acres per farmer was 12.2 in Bombay, 9.2 in the Punjab, 8.5 in the Central Provinces and Berar, 4.9 in Madras, 3.1 in Bengal, Bihar, and Orissa, 3.0 in Assam, and 2.5 in the United Provinces. Averages, of course, conceal as much as they reveal. Special enquiries have shown that in Bombay, where the average holding seems to be fairly large, actually about 50 per cent. of landowners had farms of under 5 acres; in the Punjab, 37.9 per cent. of the cultivators held less than 2.5 acres each, 17.9 per cent. between 2.5 and 5 acres, 20.5 per cent. between 5 and 10 acres, and 23.7 per cent. over 10 acres; in Bengal, 42 per cent. of farmers' families held less than 2 acres and another 20 per cent. between 2 and 4 acres; and in Ajmer-Merwara, more than a third of the farmers had less than 2 acres, 83 per cent. in all had less than 6 acres, and only 5 per cent. had more than 10 acres.

The approximate area utilised per rural family in Siam has been estimated at 1.75 hectares in the southern and north-eastern regions, 2.25 hectares in the northern region, and 1.25 hectares in the central region (1 hectare=2.47 acres).

In Burma, the average cultivated area per farmer is about 10 acres, but in some parts of the country, particularly in Lower Burma, the average is known to be substantially greater.

The official economic surveys recently carried out in eight districts in Ceylon showed that the average number of families owning over 5 acres of land was only 8.5 per cent. of the total number of families in the villages surveyed.

The size of farm holdings in Indo-China is remarkably small in certain parts of the country as a result of the repeated subdivision of land under the pressure of population. In Tonkin, 61.6 per cent. of the farming families had less than 0.36 hectare of ricefields in 1931-32, and 25 per cent. had between 0.5 and 2.5 hectares. The situation seems to be better in Cochin-China, where only 33.7 per cent. of the rice farms were below 1 hectare and 38 per cent. between 1 and 5 hectares. The size of farm was largest in Cambodia; in the 3 provinces of Battambang, Pre-veng, and Soai-rieng, only 20.9 per cent. of rice farms were under 1 hectare, while 60.2 per cent. were from 1 to 5 hectares and 15 per cent. from 5 to 10 hectares.

In describing the size of farm holdings in Indonesia and Malaya, a sharp distinction must be drawn between subsistence

agriculture and plantation agriculture. The plantations, mostly operated on a very large scale, will be considered later in this chapter. Comprehensive statistical data are lacking on the size distribution of farms in various parts of Indonesia. In Java, the subsistence farms are reported to be very small, averaging not more than 0.9 hectare per landowner liable to pay land tax; this includes sawahs or flooded fields (0.38 hectare) and dry ground (0.5 hectare). Statistical information on the size of subsistence farms is not available for Malaya.

The small size of farm holdings in the Philippines was clearly shown in the census of 1918: 37.9 per cent. of the total number of agricultural undertakings were less than 0.35 hectare; 23.3 per cent. were from 0.35 to 1 hectare, 16.8 per cent. from 1 to 2 hectares, 14.4 per cent. from 2 to 5 hectares, and only 7.6 per cent. were 100 hectares and over. There was little difference in the distribution by size between the farms operated by tenants and those operated by the owners; the latter group is by far the larger of the two. In view of the large reserves of cultivable waste land on many of the islands, the preponderance of small farms in the Philippines is striking.

In contrast to the small size of the great majority of the holdings in Asiatic countries, it may be noted that the average size of holdings is estimated at 145 acres in the United States, 40 acres in Denmark, 25 acres in Sweden, 21.5 acres in Germany, and 20 acres in England. In the south-eastern European agricultural countries, the size of farms also seems to be considerably larger than in the Asiatic countries, to judge from the agricultural area per head of agricultural population, which is, for instance, 2.47 acres in Bulgaria, 2.96 acres in Poland, and 3.21 acres in Rumania and Yugoslavia. In Australia, about 66 per cent. of the total number of private holdings in 1937-38 were between 100 and 5,000 acres. In New Zealand, at about the same date, 20.7 per cent. of all holdings were between 10 and 100 acres, 42.3 per cent. between 100 and 640 acres, and 10.6 per cent. between 640 and 5,000 acres.

EFFECTS OF SMALL SIZE OF FARMS

The small size of farms, which is a concrete manifestation of population pressure on the land, is the core of the agrarian

problem confronting Asiatic countries. Commenting on Chinese agriculture, one authority states that "the small size of most farms is the fact from which the whole scheme of Chinese agriculture takes its stamp".¹ Broadly speaking, this observation holds true of other Asiatic countries as well. Its economic consequences may be briefly summarised.

Low Income and High Indebtedness

First and foremost is the effect of the size of the farm on the income of the rural family. While the amount of income that a rural family can derive from the land is determined jointly by the size of the farm and the productivity of the land, for a large section of the rural population in Asiatic countries it is clearly the extremely small size of the farms rather than the low productivity of land which is the basic factor limiting the income that can be earned from agriculture. Given its small farm, a rural family can, by improving productivity alone, raise its income up to a certain limit only, beyond which further improvements in productivity would lead to disproportionate increases in costs and consequently to no net increase in income. Furthermore, the possibility of improving productivity, as will be discussed in more detail in Part II, also depends partly upon the size of the farm itself.

There can be no doubt that in Asiatic countries the minute size of the farm is the basic cause of the low level of income earned by an average rural family. In parts of China, India, Indo-China, Indonesia, and the Philippines, the units of agricultural enterprise operated by most rural families are far too small to provide even a basic minimum subsistence. This fact may be further illustrated by the following summary of the conditions of an average household in two Chinese villages in provinces where the size of most farms is particularly small, Yit'sun in Yunnan province and Kiangt'sun in Kiangsu province:

			Yit'sun	Kiangt'sun
Average size of household	..	..	5.0	4.1
Size of family holding	..	..	0.65	0.59
Area of rented land	..	..	0.26	0.70
Size of farm under operation	..	..	0.91	1.29

		piculs ¹	
Total income from farm in terms of rice	..	57.0	61.6
Rent in terms of rice .. .. .	..	13.5	28.0
Rice required for household consumption ²	..	24.5	20.8
<hr/>			
Rice remaining after consumption and rent	..	20.0	13.8
Deficit ³ .. .. .	..	4.5	7.0

Source: Hsiao-Tung FMI and Chih-I CHANG: *Earthbound China*, (Chicago, University of Chicago Press, 1945), pp. 298-299. The figures quoted for Yit'sun in the last two lines of the table are those given in the source, but it will be noted that if the figures in the earlier lines are correct, the last two figures should be 19.0 and 5.5.

¹ 1 picul = 110.231 lbs. ² At the rate of 7 piculs a year for one adult male. ³ Assuming other necessary expenditures require the same amount of rice as that for household consumption.

In these two villages, therefore, the income derived from the average farm is so small that, after deducting the rent and the quantity of rice needed for household consumption, the margin left is insufficient to cover other necessary expenses. In such cases high rent is a major factor reducing the net income of the rural family, but the large amount paid in rent is itself explained by the extremely small size of the average household's own holding and its consequent urgent need to rent additional land in order to make a living.

Some of the characteristic features of the rural economy of many areas in Asia are an outcome of the inadequate incomes obtained from the land. One salient feature is the dependence of the rural population upon supplementary sources of income for a part of its livelihood. Rural industries, which will be described more fully in the next chapter, form the principal source. These industries serve to provide the farmers with a gainful occupation during long periods of seasonal unemployment and with the additional income essential for a bare minimum subsistence. Where such industries do not exist or have steadily declined as a result of the competition of machine industry at home and abroad, the living conditions of the peasant are indeed bad. This point, as will be noted later, has an important bearing upon the direction of industrialisation to be pursued in Asia. One of the aims of industrialisation is to raise rural incomes by shifting away the surplus rural population, but if this is not properly planned, it may deprive the rural population of an important source of income by destroying its rural industries.

Another salient feature of the economy of Asiatic countries is the heavy burden of rural indebtedness.¹ If the debt of

¹ On this subject, see also the report on item II, op. cit., pp. 13-14.

the rural population were incurred primarily for the purpose of improving agricultural productivity, the growth and extensiveness of rural indebtedness would give no cause for alarm. In many Asiatic countries, however, the heavy rural debts have been accumulated chiefly as a result of borrowing to finance consumption. The problem is particularly acute in India: "A very large section of agriculturists are inextricably steeped in debt; they are born in debt, live in debt, die in debt and bequeath debts."¹ In 1929, it was estimated that the total rural indebtedness for the Indian provinces was in the neighbourhood of 9,000 million rupees. This indebtedness was not only exceedingly large, but was rapidly increasing. In the Punjab, for instance, the rural debts rose from 900 million rupees in 1921 to 1,350 million rupees in 1929; and similar upward trends were observable in other provinces. Most of the money borrowed was used for non-productive purposes. The figures of the Provincial Banking Inquiry Committees for 1929 show that unproductive debts represented about 70 per cent. of the total rural debt in the United Provinces, 60 per cent. in several districts in Madras, and over 75 per cent. in several parts of Bombay. It was clearly a case of distress-borrowing resulting from the inadequacy of agricultural income, the latter being due in part to the low productivity of land but basically to the small size of the farms. It is notable that the average debt per rural family was particularly high in Assam (242 rupees), where the average size of holding was small (3 acres), and was much lower in Bombay (32.9 rupees), where the average size of holding was larger (12.2 acres).

While detailed statistics on the nature and extent of rural indebtedness in different parts of China are not available, it was roughly estimated that in 1933 more than half the farming population was burdened with debts incurred through consumption needs. A field survey of four provinces of central China (Honan, Hupeh, Anhwei, and Kiangsi) for the period 1933-1935 showed an average rural debt of \$86.10, of which only 27 per cent. went into productive uses and 73 per cent. went into consumption. Such information as is available on rural indebtedness in other Asiatic countries suggests that non-productive debts represent a large proportion of the total in these

¹R. D. TIWARI: *Indian Agriculture* (Bombay, New Book Company, 1943), p. 250.

countries as well. In Ceylon, for example, the official economic surveys showed that, on the average, 73 per cent. of the families in the areas surveyed were in debt, and it was estimated that about 90 per cent. of the total rural debts were incurred for non-productive purposes.

Because of the non-productive purposes for which the money is borrowed and the exorbitant rates of interest charged, farmers usually find themselves unable to repay their debts. When this happens the farmer has no choice but to transfer the whole or part of his land to the moneylender and to become himself a landless labourer or a tenant.¹ At best the size of his holding will be further reduced. This is the cumulative process which leads to the increasing concentration of land ownership in these countries.

The rural indebtedness accumulated in China before the war has been virtually wiped out by the subsequent price inflation; but no doubt new indebtedness is being incurred, especially for purposes of agricultural rehabilitation after the ravages of war. In some other countries, such as India and Ceylon, the debt burden of the rural population is reported to have been substantially reduced by the rapid rise in agricultural prices during the war; but, as the Ceylon Government has pointed out, the steady rise in the cost of living makes it unlikely that any permanent change has taken place with regard to the indebtedness of the bulk of the rural population.

Low Output per Head

The small size of farms has a direct bearing on the methods and efficiency of cultivation. In the first place, the diminutive size of farming units makes any significant degree of mechanisation of farming operations physically impossible. The agriculture which the peasant consequently has to practise has been aptly described as a kind of gardening. It involves expending the utmost care and much physical labour, with the aid of only a few sets of simple tools. This does not mean that there is little room for the introduction of more labour-saving farming equipment on such farms; on the contrary, the use of certain types of mechanical equipment is not only

¹ See the report on item II, *op. cit.*, pp. 34-37, for particulars regarding landless labourers in China, India, Burma, and Ceylon, and for the observations of the Asian Relations Conference on this subject.

possible but necessary in order to release agricultural labour for industrial pursuits. The basic characteristic of current methods of cultivation, namely, their labour-intensiveness, cannot be altered, however, unless the average family holding is considerably enlarged or some system of co-operative farming is adopted. It may be noted that in China's north-eastern provinces, where farms are fairly large, the use of tractors has been steadily on the increase. It is obvious that so long as the farm remains small, the extent to which output per unit of agricultural labour can be raised is severely limited and so is agricultural income per head. This remains true even if the best seeds, fertilisers, and methods of insect and plant-disease control are simultaneously applied.

Secondly, even within the framework of labour-intensive cultivation, the excessively small size of farming units leads to inefficiency. The subdivision of holdings entails a great waste of cultivable land in the shape of boundaries and fences which could otherwise be utilised for production. Further, when the unit of agricultural enterprise becomes unduly small, the cost of production tends to rise because fixed costs per unit of output are high. It is stated that in India the holdings are so small that they do not task to its full strength even the meagre equipment of the average cultivator. Moreover, since the peasants living on small farms normally earn an income not even sufficient to provide their families with a minimum livelihood, they can hardly be expected to possess the financial resources necessary for the adoption of more efficient farming equipment and practices requiring capital expenditure. Improvements in the productivity of small farms in Asiatic countries are therefore rendered difficult, if not altogether impossible.

The fragmentation of holdings is an additional factor making for inefficiency. It is well-known that in Asiatic countries most of the farms, small as they are, are split up into numerous tiny parcels and strips lying, it may be, more than a mile apart from each other, separated by lands belonging to other farmers. The chief reason for this fragmentation is that it is the practice not only to divide a holding among the heirs, but also to take into account in the division the different qualities of the land of which it is composed. In China, according to Professor Buck's survey, the average number of parcels is 5.6 per farm.

In India, it has been estimated that over a greater part of the country, holdings, large and small, are split up on an average into 5 to 8 parcels. Similar conditions prevail in most other Asiatic countries, except in Java, where most of the farms are much too small for fragmentation. The inefficiencies of cultivation entailed by such a practice are immediately obvious: it involves waste of land and human labour and makes it difficult to introduce modern irrigation works and improved farm machinery. Consolidation of holdings is, therefore, a necessary first step towards agrarian reform in these countries. Substantial progress has been made in the consolidation of holdings in India, particularly in the Punjab, where it has been carried out by the co-operative method.

The low agricultural productivity per unit of labour in Asiatic countries is thus fundamentally due to the small size of the farms, which limits the possibilities of substituting capital for labour. The difference in labour productivity under different methods of cultivation suited for farms of different sizes may be illustrated by the fact that, according to one estimate, an average of 4.55 working days of 10 hours each were required for the production of one quintal of rough rice in China, and only 0.3 working days in the United States. Equally striking differences are revealed by a comparison of the number of man-hours of labour required per acre for all processes of cultivation and harvesting by the machine methods in use in 1924 and by the hand methods practised in 1850 and earlier in the United States, the latter being broadly comparable to the present-day methods of cultivation in Asiatic countries. The estimated figures under these two different farming methods were 182.7 man-hours as against 27.5 for maize, 167.8 man-hours as against 118.5 for cotton, and 62.4 man-hours as against 15.5 for wheat. The differences would be still greater if the present level of agricultural mechanisation were used for comparison.

This, however, is not all. The low productivity of agricultural labour in Asiatic countries is also partly a result of the farmer's failure to obtain the maximum return from his land even within his labour-intensive framework of cultivation. This is indicated by the low yield per acre of a number of crops in Asiatic countries compared with that in many other countries. For instance, the average yield of wheat per acre shown

in the *Statistical Year-Book of the League of Nations, 1933-34* was 989 lbs. in China and 660 lbs. in India, compared with 2,017 lbs. in Germany, 1,918 lbs. in Egypt, 1,713 lbs. in Japan, and 1,383 lbs. in Italy; that of rice, 2,433 lbs. in China, 1,500 lbs. in Burma¹, and 1,240 lbs. in India, compared with 4,568 lbs. in Italy, 3,444 lbs., in Japan, and 2,998 lbs. in Egypt; and that of cotton, 204 lbs. in China and 89 lbs. in India, compared with 535 lbs. in Egypt and 286 lbs. in the United States. Such differences in crop yield per unit of area may be ascribed in part to differences in the quality of the land under cultivation and in climate. But some of the factors responsible for the low yields in Asiatic countries can be removed. The inefficiencies of cultivation due to the fragmentation and small size of farms have already been mentioned. There are a number of other important factors, among them, the deterioration of soils, the poor quality of seeds, the antiquated methods of manuring, the inadequacy of irrigation, the heavy damage done by insects and plant diseases, the lack of efficient farming equipment, and the unsatisfactory methods of livestock breeding. The elimination of these causes of inefficiency does not depend on an enlargement of the size of farms; it requires mainly a knowledge of modern agricultural science, and the capital necessary for its application.

DISTRIBUTION OF AGRICULTURAL INCOME

The poverty of the agricultural population in Asiatic countries is due not only to the small output per head, but also in many cases to the fact that a considerable proportion of the income derived from this small output is absorbed by rent, interest, and, in some instances, taxes. Furthermore, the manipulation of prices by the traders usually results in cutting down the cultivator's proceeds from the sale of his crops.

Rent

The proportion of tenants of one description or another to the total rural population varies widely from country to country in Asia, and also from one locality to another within each country.² Of the farmers in the area in China covered by

¹ 1945-46 figure, supplied by the Government of Burma.

² The information on land tenure in Asiatic countries given here may be supplemented by reference to the report on item II, *op. cit.*, pp. 5-12.

Professor Buck's survey, 44 per cent. were owners, 23 per cent. part owners, and 33 per cent. tenants. The proportions, however, differed greatly between the wheat region in the north and the rice region in the south; in the former, 65 per cent. of the rural population were owners, 18 per cent. part owners, and only 17 per cent. tenants, whereas in the latter region only 27 per cent. were owners, 27 per cent. were part owners, and 46 per cent. tenants. This difference is to be explained partly by the fact that an increasing number of small occupying owners in the coastal provinces had been reduced to the status of tenants as a result of the loss of their income from rural industries under the impact of competition from machine-made goods. The rent factor thus appears to be of greater importance in the southern provinces of China than in the north.

Tenants represent by far the largest proportion of the rural population in India. This may be ascribed to the systems of land tenure in operation there. Nearly all the land under the two systems of landlord tenure and joint village tenure, representing no less than 64 per cent. of the total area under cultivation in the Indian provinces, is rented to tenants. And even in the case of the remaining area, held by peasant proprietors, those with over 25 acres of land usually let a part of it to a tenant. Rent is therefore an important factor in the case of an even larger proportion of the rural population in India than in China.

The tenancy system is also prevalent in some parts of Burma. Before the war, about half the occupied land in Lower Burma was in the hands of non-agriculturists, most of whom were non-resident Indian landowners. In 1936, the area rented to tenants was estimated at approximately 9 million acres, most of it on short-term tenancies and at high fixed rents.

Tenancy is relatively unimportant in Siam, particularly in the regions of subsistence agriculture, where most of the peasants cultivate their own land; except in the commercialised regions, where it has steadily gained ground, it has been estimated to vary roughly from 5 to 30 per cent. of the total number of holdings. In Ceylon, too, the majority of cultivators, especially rice growers, own their land, and it is estimated that only about 25 per cent. are tenants. In Indo-China, tenants form only a minor proportion of the rural population, except in Cochin-China. Small owners occupy no less than 98.7 per

cent. of the agricultural holdings in Tonkin, 90 per cent. in Annam, but only 64.5 per cent. in Cochin-China, where large land holdings and absentee landlordism prevail and the number of landless agricultural labourers is high. Statistical information on the tenancy situation in Indonesia is rather scanty. According to a 1926 estimate covering a number of districts, tenants accounted for only 3.4 per cent. of all adult men. While definite figures are unobtainable, it is known that tenancy, mainly in the form of share-cropping, is much more widespread in Java than in the Outer Provinces. This is to be expected, considering the marked difference between these two regions in regard to the pressure of population on the land. In the Philippines, the census of 1918 showed that only 16.6 per cent. of the agricultural units were operated by tenants, 5.6 per cent. by squatters on the public land, and the rest mostly by small owners. Because of the poverty of the Filipino peasants, resulting from the extremely small size of their farms, there may well have been a relative as well as absolute increase in tenancy since then; but no recent factual data are available on this point.

It will thus be seen that rent is a vital factor affecting the net income position of a large proportion of the population of Asiatic countries, although the proportion varies considerably in different parts of the region. The question of rent has, of course, many different aspects. Those which concern the tenants most are, first, the proportion of the produce from the leased land which has to be paid to the landlord in the form of rent and, secondly, the conditions under which rent is to be paid. In regard to the first aspect, it again needs to be stressed that the proportion of produce paid in rent varies greatly from one locality to another even within the same country. Comprehensive information on the point is not available for China. In the areas covered by Professor Buck's first survey (published in 1930), the rent to be paid to the landlord varied from 25 to 66 per cent. of the crop, and the most common share-crop rent was approximately 50 per cent. of the crop. The latter figure is borne out by other field investigations. In India, the average rate of rent has been estimated at about 50 to 60 per cent. of the gross produce raised by the tenant, and the condition of the share-cropper is even worse. Besides paying his rent, a share-cropper is required

to pay a premium and to render other services to the landlord in return for permission to cultivate the land; in Bengal, for instance, the rent paid by share-croppers is estimated to average 25 rupees per acre, compared with under 3½ rupees per acre in the case of occupancy tenants. In Siam and Indonesia, equal sharing of the crop between tenant and landlord seems to be a common practice. Rents in Ceylon vary from one sixth to one half of the crop, depending on the region and the type of crop.

Assuming that 50 per cent. of the crop is the approximate average rent, this is indisputably too heavy a burden on the average tenant, especially in view of the diminutive size of his farm. From the same acreage of land and for the same amount of labour applied, a tenant can earn only half as much net disposable income as an occupying owner. In some areas, however, the landlord provides the tenant with a part of the seeds and farming equipment needed and some of the working animals, and is sometimes responsible for the maintenance of irrigation facilities. Where such conditions of tenure prevail, the net burden of rent upon the tenant is clearly less onerous. On the other hand, share-croppers not infrequently have to render services to the landlord in addition to paying rent.

Another factor to which attention should be called is absentee landlordism, which exists in many Asiatic countries, particularly in regions where commercial farming has been developed, such as the coastal provinces of China. In these cases the relation between landlord and tenant is purely financial and entirely one-sided. The landlords, most of whom reside in the cities, draw the rents from their tenants but assume few, if any, obligations in return. The rents are usually high. Furthermore, in many places, though rents are fixed in terms of the crop, they are paid in cash and the rate of conversion is arbitrarily determined by the landlords.

Although the conditions of land tenure vary in different localities, tenants may generally be said to be in a much worse position than owner-cultivators. Not only is their net disposable income lower, but their farms are also smaller owing to their inability to provide the fixed and working capital necessary to operate larger farms. The amount they spend per acre on seeds, fertilisers, and implements is also substantially less than

that spent by owner-cultivators. The smaller size of his farm, the lower productivity of his land, and the transfer of a considerable share of his small income to the landlord are the three factors which make the tenant's position even more difficult than that of the average owner-cultivator.

Another aspect of land tenure which profoundly affects the economic position of tenants is the degree of security of tenure. The diversity of local customs in this respect makes it difficult to present a summary description of the situation in each Asiatic country. Generally speaking, different systems of tenancy, affording the tenants different degrees of security, may be found in one and the same country. For instance, in India, the tenants under the permanently or temporarily settled estate systems are "occupancy-right holders" who hold their lands on a permanent and heritable tenure, usually with unrestricted right of transfer, and pay rent to the proprietors of the estates. It is, however, a not uncommon practice for occupancy-right holders to lease their lands to subtenants, the so-called tenants-at-will, who hold the land from year to year and are liable to be evicted at any time. The latter not only enjoy no security of tenure, but in many cases have to bear a heavy rent burden under the crop-sharing system.

Security of tenure in China is greatest in the coastal provinces, where absentee landlordism is most prevalent. In Kiangsu and Chekiang it is the general rule that the tenant owns the surface of the land and the landlord the subsoil, and the tenant cannot be evicted so long as he pays the rent. In other parts of China the position of tenants is much less favourable in respect of security of tenure; in certain districts the tenants have little protection against the direct intervention of the landlord. Before the Burmese Tenancy Act was passed in 1939, tenants in that country usually worked on a yearly lease which gave no security of tenure and often contained unfair conditions; they had to pay high rents, and there was no adequate provision for remission of rent in bad years. These disadvantages were removed by the Act, which secures continued tenure to tenants of agricultural land at a fair rent¹, unless the tenant is unwilling to pay the standard rent or has

¹ In 1946, a new Tenancy Act was introduced, which replaced the "fair rent" specified in the earlier Act by a "standard rent" determined by the Government.

treated his landlord unfairly. The Act also protects the rights of ejected tenants in respect of crops sown or planted by them before the date of ejectment. For other Asiatic countries little information is available on the question of security of tenure.

In view of the fact that the terms of land tenure have such a vital bearing on the welfare of a large section of the agricultural population, and in view of the complexity of the question and the paucity of detailed information on the conditions of tenancy in different parts of Asia, it would seem desirable that a comprehensive investigation should be made into conditions of land tenure and their influence on farm methods and living standards in Asiatic countries.

Interest

An equally important factor in limiting the net disposal income of farmers in Asiatic countries is the high level of interest charges paid to moneylenders. While the rent factor affects only the tenant class, the interest factor affects the well-being of owner-cultivators and tenants alike, though the latter undoubtedly suffer more from it because of their greater need for distress-borrowing. The prevalence of rural indebtedness was mentioned in the preceding section, where it was also shown that by far the larger part of rural loans in these countries is used, not for productive purposes, but for consumption. Hence the loans do not serve to enhance the farmers' earning capacity, with the result that they are virtually unable to pay interest. Nevertheless, they are ready to borrow on almost any terms, since without borrowing, they can hardly survive. In the absence of modern rural credit institutions and of adequate legislative protection, this imperative demand for cash gives rise to usury.

According to a comprehensive survey made by the National Agricultural Research Bureau in China in 1934, which covered 22 provinces, only 5 per cent. of over 6,000 rural loans reported were borrowed from banks and co-operatives, and 95 per cent. came from sources—such as pawnshops, exchange shops, landlords, and merchants—which are apt to charge excessive interest rates. The same survey disclosed that in 12.9 per cent. of 2,259 cases examined, an annual rate of interest of over 50 per cent. was charged; in 11.2 per cent. of the cases, the rate

was 40-50 per cent.; in 30.3 per cent. of the cases, it was 20-30 per cent.; and in only 9.4 per cent. of the cases was it 10-20 per cent. In some parts of China the rates of interest on rural loans before the war were not only excessively high but were rising rapidly. For instance, in the district of Kwangan, north of Chungking, the annual rate of interest rose from 25 per cent. in 1932 to 40-60 per cent. in 1936, and the monthly rate from 2.5 per cent. to 5-7 per cent. This rapid rise in interest rates was accompanied by a general increase in the number of usurers.

Rural finance is equally ill organised in India. Private moneylenders supply most of the rural credit, particularly for the middle and poorer classes of cultivators. The amount provided by the provincial Governments and the co-operatives is relatively small, though it has been increasing slowly but steadily in recent years; the joint stock banks as a rule play little part in the supply of credit to farmers. The rates of interest charged by the private moneylenders vary according to the nature of the security, the degree of competition between the creditors, and the needs of the borrower.

The large landowners can raise loans, due to approved security, at rates varying from 9 to 12 per cent. in most provinces. But in the case of small cultivators, who constitute the bulk of the debtors, rates charged are materially different. On secured loans, rates vary from 12 to 50 per cent., but on unsecured loans, the rates may be up to 300 per cent. The rate of interest charged per annum on grain loans is generally 50 per cent., but rises up to 100 per cent. in several cases.¹

In Ceylon, it is usual for the peasant to maintain a running account with the village dealer, on the undertaking that he will sell his crop to the dealer. In the case of short-term loans, interest varies from 25 to 50 per cent. per season. Long-term loans are usually obtained by mortgaging land to a villager with capital. In most cases, cattle and ploughs are obtained on loan and in some cases, payment for their use takes the form of a sizable share of the crop.

The root cause of rural indebtedness in Asiatic countries is the low income of the agriculturists. Not until this income is considerably enhanced, will indebtedness as a chronic feature of their economic life disappear. But its burden could be great-

¹ R. D. TIWARI, *op. cit.*, p. 271.

ly reduced by making available to the needy small peasants liberal financial assistance in such forms as non-interest-bearing consumption loans and short-term and long-term loans at reasonable rates of interest for productive purposes.

Taxes

In addition to the payment of high rent and usurious interest charges, peasants in several Asiatic countries have also to pay a substantial portion of their income to local and central Governments in the form of taxes. Government revenues are derived largely from taxes on essential consumers' goods; and though the peasants produce a large part of their own requirements, there is considerable taxation on the necessities on which their small cash income is spent. One example is the tax on salt in both China and India.¹ Moreover, taxation on land is usually heavy and entails much hardship for the small owner-cultivators.

Dealers' Profits

The inadequacy of marketing arrangements also affects the farmers adversely. In many Asiatic countries the farmers usually dispose of a portion of their meagre output for cash, in order to purchase other essential goods and also to meet various cash payments, such as rent, interest charges, and taxes. In the case of raw material crops most of the produce is sold on the market. For instance, in China, Professor Buck's survey showed that, on the average, the farmers sold about half their crops for cash, the proportion varying from 31 per cent. in Hopei to 84 per cent. of cotton crops in Chekiang. Agriculture has been commercialised to a fairly high degree also in India. The income of farmers in these and other Asiatic countries thus depends not only upon the volume of output, but also upon the prices at which their produce can be sold. It is a peculiar feature of the determination of agricultural prices on local markets in these countries that, while numerous small peasants compete with each other in selling their produce, the buying is controlled collectively by a small number of wholesale dealers. Bargaining strength is therefore overwhelmingly

¹ In its budget proposals for 1947-48, the Government of India, provided for the abolition of the salt tax; this proposal was adopted by the Legislature and came into effect on 1 April 1947.

on the side of the buyers. The farmers are usually most in need of cash at the harvest season because many of them are under pressure to repay short-term debts, and in some places they have also to pay rent in cash. They are naturally anxious to sell their produce as quickly as possible; moreover, they lack proper storage facilities for holding it off the market for any considerable length of time. The dealers, on the other hand, act in concert to postpone their buying until prices have fallen sufficiently. Consequently, the prices at which farmers sell their produce are always the lowest of the year. As soon as the harvest season is over, agricultural prices again begin to rise. This sort of seasonal price fluctuation is clearly detrimental to the well-being of the peasants.

PLANTATION ECONOMY

In the tropical parts of Asia plantation agriculture exists side by side with subsistence cultivation. It assumes a predominant role in Indonesia and Malaya; to a less extent it also prevails in parts of India, Siam, Burma, Ceylon, Indo-China, and the Philippines. There are striking differences between the two systems of cultivation in respect of the types of crops raised, the size of holdings, the capital invested and management, the relation to industry, and the status of the labour employed.

In contrast to subsistence cultivation, which is devoted mainly to food crops for domestic consumption, plantation agriculture produces mostly tropical crops for export to world markets. Rubber, cocoa, coconuts, cinchona, tea and coffee are the usual plantation crops, and their raising requires a considerable amount of capital investment; this explains in part why small-scale farming is not best suited for this purpose, though in many Asiatic countries, rubber, for example, is grown in small holdings. The extent to which plantations diversify their crops varies in different parts of these countries. Indonesia is a case in point: whereas on about half the plantations in Java the growing of several crops is combined, *e.g.* hevea with coffee, or cinchona with tea, specialisation is a marked feature of the plantations in the Outer Provinces, where no less than 85 per cent. of the plantations grow only one product.

Under the plantation system the size of holdings is, on the whole, incomparably larger than in the case of subsistence cul-

tivation. The Assam tea plantations in India, which had a total area of 440,278 acres under tea in 1942, averaged 390 acres per plantation; the Bengal tea plantations (201,495 acres) averaged 563 acres. Estates of more than 100 acres formed 81 per cent. of the 549,886 acres of tea plantations in Ceylon in 1945, 55.7 per cent. of the 636,936 acres of rubber plantations, and 16.2 per cent. of the 1.24 million acres of coconut plantations. In Indonesia, the average size of a plantation in 1939 was estimated at about 910 hectares in Java and 1,165 hectares in the Outer Provinces, but the plantations varied greatly in size in different parts of the Outer Provinces, ranging from an average of 266 hectares in the province of Manado to 3,200 hectares in the East Coast province of Sumatra. In Malaya, out of 3.3 million acres of rubber plantations in 1938, about 2 million acres, or 61 per cent., belonged to estates of more than 100 acres, while 38 per cent. belonged to smallholders. In the same year, out of 72,143 acres under oil palms, 87 per cent. belonged to estates of over 100 acres. The holdings of coconut plantations were, however, much smaller. Of a total area of 613,417 acres under coconut crops in 1938, not more than 125,000 acres, or approximately 20 per cent., consisted of estates of 100 acres or more, while the rest formed estates of only a few acres each.

The optimum size of plantations, of course, varies with different crops and different methods of farming. For instance, in the case of tea plantations in India and Ceylon it was formerly considered impracticable, because of primitive roads and transport by bullock carts for the daily delivery of the leaf, and also because of the lack of finance, to operate plantations of much over 500 acres. It has now been estimated that, with the introduction of mechanical transport and electric power, the optimum size of a tea plantation in these countries could be raised to about 800 acres.¹

The fundamental difference between subsistence agriculture and the plantation system, however, lies in ownership and management. Whereas subsistence farms are owned and operated by the local population, the plantation system, on the other hand, is run mostly by outsiders and has been developed by outside capital. It represents the principal form of deve-

¹ Cf. C. R. FAY: "Plantation Economy", in *Economic Journal*, Dec. 1936, p. 684.

lopment by western capital of the natural resources of the areas in question. From the standpoint of the cultivator, subsistence farming is essentially a way of life rather than a business enterprise. The plantation system is totally different: it is an investment for profit. Ownership is usually vested in a corporation with limited liability, and the business is conducted by a more or less numerous staff of managers in accordance with modern efficiency methods. Many of the plantation enterprises have their headquarters in the country which supplies the capital.

Some figures may be cited to indicate the predominant role of plantation agriculture in the total foreign investment in the tropical parts of Asia. It is estimated that there were 193 sterling companies in operation in Ceylon in 1939, with a total investment of 702 million rupees, including 488 million rupees invested in tea and rubber plantations. There was a further outside investment of 158 million rupees in companies with rupee capital, thus making a total investment from abroad of 860 million rupees, or about 85 per cent. of the total company investments. In Indo-China, plantation agriculture likewise holds first place in business investment from abroad, owing mainly to the rapid development of rubber production in the last few decades. Of a total of 314,000 acres under rubber in 1936, only about 3 per cent. was in the hands of small Asiatic owners. Similarly, in Indonesia, of a total private business investment of about 4,000 million guilders from abroad in 1929. "more than half was in plantation agriculture; about 800 million in sugar, held chiefly by the Dutch; 700 million in rubber, where the Dutch share was only 44 per cent., the British, 29 per cent., the French, 10 per cent., and the American, 8 per cent.; 200 million in tea; 130 million in coffee; 120 million in tobacco; 89 million in oil palms; 25 million in cinchona; and 5 million in coconuts".¹ The total estimated outstanding investment from abroad in Malaya was approximately £106 million in 1936, of which about 52 per cent. was in rubber companies, 13 per cent. in tin mines, 9 per cent. in miscellaneous enterprises, and 26 per cent. in the form of public debts incurred mainly for development purposes. British capital represented over 70 per cent. of the total business investment. The ownership of

¹Kate L. MITCHELL: *Industrialization of the Western Pacific* (New York, Institute of Pacific Relations, 1942), p. 198.

rubber plantations of over 100 acres in 1938 was distributed as follows: European, 75.3 per cent.; Chinese, 15.9 per cent.; Indian, 4.3 per cent.; and other, 4.5 per cent.

Many plantations extend their productive activities beyond the growing and harvesting of crops, and undertake the processing of the products. The degree of processing done by a plantation, however, varies greatly with different crops, depending upon the technique required to transform the raw material into the finished product. The tea plantations in India and Ceylon, for instance, partake more or less of the nature of a vertically integrated industry, owing mainly to the simplicity of the transformation process. "Every tea estate has on it, or adjoining it, a tea factory; and in this factory the tea leaf is carried to its final processed form. When it arrives overseas, it only has to be blended to be ready for consumption."¹ In the case of cocoa and coffee, the processing carried on by the plantation is generally confined to the preliminary stages, and this is true also of rubber and several other tropical products. To the extent that plantations in these countries establish their own mills to process their products up to one stage or another, the plantation system may be regarded as combining agricultural and industrial production, although in the majority of cases the latter element plays only a minor role.

Another important feature of the plantation system which distinguishes it from subsistence cultivation is the position of the labour employed. A plantation, being a large-scale enterprise, usually employs a considerable number of workers, in some instances as many as three or four thousand, and all these workers are placed under a centralised system of supervision. Wages are fixed and paid in cash. The position of labour under the plantation system is therefore similar to that in a modern factory, except that most of the work is agricultural in character and is performed in the open air.

The sources from which the plantations obtain their labour differ according to the density of population. In Java, where the density is exceptionally high (for Java and Madura together, it was 818 persons per square mile in 1930), the under-employed and unemployed peasants constituted before the war an almost inexhaustible reserve of labour, upon which the plan-

¹ C. R. FAY, *loc. cit.*, p. 628.

tations could readily draw. It should be noted, however, that the plantation labour force in Java consisted largely of irregular, casual workers; they came to work on the plantations only to earn a small supplementary income, and returned to their villages as soon as the season was over. They were usually paid at piece rates. The relative importance of workers of this type is illustrated by the distribution of the labour force in the sugar industry in 1930: out of 529,000 persons employed in sugar cultivation, only about 82,000 were regular labourers or semi-regular seasonal workers. The entire labour force of the plantations formed, however, only a small part of the total local population. Only 962,000 persons were employed in plantation agriculture in Java in 1930, representing no more than 6.6 per cent. of the total gainfully employed population. This indicates clearly that the employment opportunities created by the plantations were far from sufficient to absorb the large and rapidly increasing surplus rural population.

In the Outer Provinces, which are sparsely populated (27.8 persons per square mile in 1930), the plantations were faced with the problem of labour scarcity. They depended very largely upon labour recruited in other regions, mainly in Java. Up to the world depression in the early 'thirties, a considerable proportion of the recruited workers were subject to penal sanction contracts, but during the following years this proportion steadily declined, and in 1941 penal sanctions were finally abolished.¹ In 1939 the plantation workers in the Outer Provinces numbered 333,936. Because of the relative scarcity of labour, these plantations mostly specialise in crops which have a relatively low labour requirement; and most of them, as already noted, grow only one product.

The labour supply situation in Malaya is somewhat similar to that in the Outer Provinces in Indonesia. The density of population is comparatively low (108.1 persons per square mile in 1941), and hence there has been little surplus rural population for the plantations to draw upon. Since the peasants normally prefer to live on their small farms rather than to work as wage earners on plantations, the planters have

¹ Cf. the report on item III on the agenda: *Programme of Action for the Enforcement of Social Standards Embodied in Conventions and Recommendations Not Yet Ratified or Accepted*, pp. 19-20. See also, INTERNATIONAL LABOUR OFFICE: *Social Policy in Dependent Territories, Studies and Reports, Series B, No. 28* (Montreal, 1944), p. 38.

had to import labour from the densely populated neighbouring countries, primarily India, and to a very much smaller extent Java. The large-scale inflow of foreign labour has profoundly changed the racial distribution of population in Malaya: in 1941, out of a total population of approximately 5.51 million, only 41.3 per cent. were Malays, while Chinese formed 43.1 per cent., Indians 13.5 per cent., Europeans 0.6 per cent., and others 1.5 per cent.¹ The majority of the plantation workers, particularly on the rubber plantations, were Indians, while the tin miners were mainly Chinese. The supply of such foreign workers was particularly flexible: during the 'thirties, for example, many of the Chinese and Indians returned to their respective countries when the demand for labour declined and came back to the plantations when the demand increased.

The tea and rubber plantations in Ceylon have also depended heavily upon immigrant labour from southern India, where real wages were much lower owing to the greater density of population.² The coconut plantations, on the other hand, depend mainly on the part-time work of local agricultural labour. It was estimated that at the end of 1936 there were no less than 659,000 Indian workers on the plantations, as against 57,000 Ceylonese workers. However, the rapid growth of the population in Ceylon in recent years, together with the deterioration in the living standards of the small peasants, has led to an increasing supply of Ceylonese labour for the plantations. By 1945, the number of Ceylonese workers employed on plantations had increased to 134,000, and that of Indian workers had fallen to 447,000. The decrease in the number of Indian workers was due, in part, to the action of the Government of India in prohibiting the flow of unskilled labour into Ceylon. In India itself, most of the labour on the tea estates is recruited from other parts of the country, and only about 5 per cent. of the workers are obtained locally.

¹ The corresponding figures for what is now the Malayan Union were: total population, 4.74 million; Malays, 46.4 per cent.; Chinese, 37.5 per cent.; Indians, 14.4 per cent.; Europeans, 0.3 per cent.; others, 1.4 per cent.

² It was estimated that in 1927 real wages on the estates in Ceylon were 100 per cent. higher than the wages of rural labourers in southern India. Cf. Harold BUTLER: *Problems of Industry in the East* (International Labour Office, Studies and Reports, Series B, No. 29, Geneva, 1938), p. 36.

It thus appears that the growth of the plantation system in many parts of tropical Asia has been made possible by the inter-regional and international mobility of labour. Owing to the ease with which workers from neighbouring areas have had access to these labour markets, the scarcity of labour in particular areas has failed to bring about any substantial rise in the wage rates of plantation workers. Even allowing for the cost of recruiting and transporting immigrant labour, it has been cheap owing to the high level of unemployment and underemployment in the areas from which the immigrants come. Thus the labour cost per unit of product has remained very low, which is undoubtedly a main factor in the high rate of profit normally earned by outside capital invested in plantation agriculture in Asia.

Because of the cheapness of labour, the methods of production adopted by the plantation system are also highly labour-intensive and are basically similar to those practised by the individual farmers in their cultivation of export crops. But as a rule the plantations apply more scientific knowledge and better technique in the selection of seedlings and cuttings, in the use of fertilisers, and in the combination of crops. For certain crops, the difference in the size of holdings has led to different methods of cultivation. For instance, in the case of rubber, the planting density, *i.e.*, the number of trees per surface unit, is much greater on the small holdings than on the plantations: some 200-300 trees per mature acre, as against 70-90 trees on plantations.¹

The instability of the income and employment of plantation workers also calls for attention. The demand for plantation labour is determined entirely by the world demand for the products of the plantations, and hitherto that demand has been subject to violent cyclical fluctuations. At the time of the great depression, between 1929 and 1932, the price of rubber dropped from tenpence a pound to less than twopence, and the price of tea from 0.75 guilder the half kilo to 0.28 guilder; and the prices of other plantation products fell on the average to something like one third or one quarter of the pre-depression level. In consequence, the output of tropical products, and

¹ For a detailed economic analysis of this problem, see P. T. BAUER: "The Economics of Planting Density in Rubber Growing", in *Economica*, May 1946, pp. 131-133.

particularly of those which were made the subject of international export quota agreements, was greatly reduced. This led to a heavy fall in the volume of plantation employment. In Indonesia, between 1929 and 1933, employment on plantations decreased from 1,200,000 workers to 600,000, or in other words, half the workers were thrown out of work, and the wages of those who remained in employment were cut. The catastrophic fall in world demand had a similar effect on the money income of the small peasant growers of export crops. The real income of the population in these areas was further reduced by the markedly unfavourable terms of trade during the depression. In Ceylon, the instability of income of plantation labour has been offset to some extent by the fixing of minimum rates of wages for Indian labourers since 1927, under the Indian Immigrant Labour Ordinance, and more recently for all plantation workers, under the Wages Boards Ordinance.

The history of the depression in the early 'thirties clearly shows how much the prosperity of the producers of export crops in the tropical regions of Asia depends on an expansionist world economy. While a rise in world demand for their products may not lead to a corresponding rise in the wages of the plantation workers because of the abundant supply of labour, a fall in world demand, on the other hand, is certain to have disastrous effects for these workers. Any international commodity agreement designed to curtail production of a plantation crop in order to keep it in balance with the long-term trends of world demand should, therefore, take fully into account the consequential unemployment of the plantation workers who lack alternative employment opportunities.

CHAPTER III

TRADITIONAL INDUSTRIES AND THEIR PROBLEMS

CHARACTERISTICS OF THE TRADITIONAL INDUSTRIES

A distinctive feature of the industrial structure of Asiatic countries is the important rôle of the traditional industries, with their numerous handicrafts and small-scale workshops scattered throughout the towns and villages. These traditional industries differ from modern factory industry in many important respects. First, they use no power-driven machinery, but as a rule only a few sets of simple, primitive tools. Their industrial technique depends mainly on the workers' skill and exertion, and provides little scope for the division of labour; the output is therefore very low. Secondly, because so little capital is needed, the productive unit in the majority of traditional industries is usually the household. In some of these industries the undertakings are so small that the members of the family constitute the entire labour force. In others, the owners of workshops take on a small number of hired workers and apprentices, the latter sometimes also performing domestic service for their employers.¹ Thirdly, in certain traditional industries the producers are dominated by the middlemen who allocate the supply of raw materials, advance credit at high rates of interest, and control the price of the products. Finally, the traditional industries are marked by their resistance to change: for centuries they have made little improvement either in productive technique or in organisation. These industries, which have become comparatively insignificant in western countries since the industrial revolution, still hold a prominent

¹ On the rôle of apprentices in Asiatic countries, see the report on item II, *op. cit.*, pp. 149-151. A general survey of existing handicrafts and cottage industries in these countries will be found on pp. 15-22 of the same report.

place in the economy of Asiatic countries, continuing to manufacture the great bulk of the goods required by the population. The preponderance of traditional industries in Asiatic countries is indicated by the number of workers they employ in comparison with the number of factory workers. A recently published estimate puts the number of handicraft workers in China in 1933 at approximately 10 million and the number of factory workers at about 1 million; of the total manufacturing net output, 78 per cent. was produced by handicraft workers and only 22 per cent. by factory workers.¹ It has been estimated on the basis of the census figures that in 1931 there were in India 6,141,000 persons engaged in cottage industries, 1,482,000 workers in large-scale industries, and 228,000 workers in small-scale industries. Although figures for the total number of factory and non-factory workers in Burma are not available, it is estimated that there are approximately 45,000 handicraft workers engaged in full-time spinning and weaving, compared with about 7,000 workers employed in textile factories. The number of handicraft workers in Indo-China in 1936 has been estimated at about 7 per cent. of the population in Tonkin and Annam, and 4 per cent. in other parts of the country, or about 1,356,000 persons altogether, as compared with not more than 120,000 workers employed in modern industries, including manufacturing and mining. According to estimates made in Indonesia in the 'thirties, workers engaged in manufacturing industries numbered about 2,800,000, of whom 2,500,000 worked in small-scale industries and only 300,000 were employed in large-scale machine industries; of the total number of workers in small-scale industries, 40 to 45 per cent. lived in villages, 40 per cent. were workers who obtained their raw materials and sold their products through a special class of middlemen (the "bakul"), and 20 per cent. worked in hand-operated workshops with less than 50 workers. Of a total of about 610,000 persons engaged in manufacturing industries in the Philippines in 1939, at least 360,000 persons worked in small-scale or household industries.

The present traditional industries in Asiatic countries cover virtually all kinds of manufacturing activity. The following

¹ Pao-san OU and Foh-shen WANG: "Industrial Production and Employment in Pre-war China", in *Economic Journal*, Vol. LVI, No. 223, Sept. 1946, pp. 428-429.

list¹ of whole-time and part-time cottage industries (excluding farming and livestock industries) still in existence in the province of Bombay may be cited as an illustration of their range:

(a) Whole-time cottage industries: handloom weaving; calico printing and dyeing; paper making; bangle making; oil pressing; soap making; tanning; shoe making; carpentry, shipbuilding, house building, cart making, etc.; toy making; blacksmithing, cutlery, etc.; pottery, tile and brick making; mango and other fruit canning; sandalwood and ivory carving; "bidi" (cigarette) making; goldsmithing; engraving, jewellery; glue making; scents and toilet products; book-binding; confectionery products; fireworks; preparation of brushes; button manufacture; copper and brass ware; etc.

(b) Part-time cottage industries: sericulture; lac industry; cashew-nut kernels (removal of shells); basket making; paddy husking; flour grinding; "gur" making; cotton ginning, carding and spinning; dal milling; rope making; fishnet making; wood cutting and charcoal burning; umbrellas and fans from palm leaves; knitting and embroidery; etc.

Traditional industries are not confined to manufacturing, but extend to mining as well. In China, for instance, as late as 1930, a considerable proportion of the mineral output was still produced by age-old methods:

Between one third and one half of the output of coal, and one-fifth of that of iron ore, have been estimated to be produced by small native mines employing a few scores of workers apiece and almost destitute of machinery... and nearly one-half of the pig iron produced is made in charcoal furnaces with bellows worked by hand or water power.²

The traditional industries still existing in Asiatic countries may be broadly divided into rural and urban industries, although the types of goods produced by the two groups overlap to a considerable extent. The rural industries, as already mentioned, play a vital part in maintaining the level of income and employment in village economy by meeting the difficulties due to the insufficiency of the peasants' income from the land, the long months of seasonal unemployment, and the existence of an enormous surplus rural population.

¹ The list is taken from *Report of the Bombay Economic and Industrial Survey Committee, 1938-1940* (Bombay, 1940), Vol. I, pp. 7-8, which defines cottage industries as industries where no power is used and the manufacture is carried on, generally speaking, in the home of the artisan himself and occasionally in small "karkhanas" where not more than 9 workers are employed.

² R. H. TAWNEY, *op. cit.*, p. 111.

In many rural districts the types of industrial occupation to which different peasant families have recourse as a supplementary source of income are partly determined by their capacity for capital investment. The poorer peasant families can only afford to engage in handicraft work which is very simple in technique, requiring much labour but little equipment; and, as a rule, the income earned from such industrial activity is extremely low. The richer peasants, on the other hand, who have comparatively large holdings of land and are able to save, are often engaged in rural industries which involve more complicated productive techniques, requiring more elaborate and expensive implements, longer periods of production, and hence larger amounts of fixed and working capital; the returns from such industries are, of course, much higher.

An illustration of the simpler and the more elaborate types of rural industries may be found in a recent case study of a Chinese village, Yit'sun, in the province of Yunnan.¹ The abundant supply of bamboo, an industrial raw material which can be put to many uses, has led to the development of two different types of rural industry in that village: basket weaving and paper making. The former is undertaken almost exclusively by the poor families of the village, those with the smallest holdings. It requires little capital and no special skill; a wedge-shaped knife and a scraper are the only tools needed. The gross profit per day of labour devoted to basket making averaged about 60 cents in December 1939; after allowing 35 cents for the cost of food, the net profit thus amounted to only 25 cents. The return from this type of rural industry is therefore very low, even lower than the wage earned by farm labour, which at that time was 50 cents for male workers and 30 cents for female workers, plus board provided by the employer. Nevertheless, the poorer peasants make baskets during the slack season for lack of more remunerative work.

The paper industry in Yit'sun, on the other hand, is operated only by the village families owning large holdings of land. Some of these landholders are also moneylenders in a small way. Compared with basket weaving, paper making is a capitalist enterprise. A simple traditional paper mill in China

¹ For a detailed study of the economic life of this village, see *Earth-bound China*, *op. cit.*, Part II: "Yit'sun: Rural Industry and the Land", pp. 135-202.

consists at least of "several pools in which the raw bamboos are decomposed by chemicals, a stone grinder by which the decomposed bamboos are ground into fibres, two filters upon which the bamboo fibres form a sheet of residue, and a baker on which the thin shoots of bamboo fibres are baked into paper".¹ The minimum fixed capital required for setting up such a paper mill in Yit'sun amounted to at least 1,000 dollars in 1939. The purchase of raw materials, chemicals and fuel, the transport of lime, and, in some cases, the wages paid to hired skilled labour called for a total annual working capital estimated at approximately 1,210 dollars. At the price of paper then ruling in the neighbouring markets, the output of a normal-sized mill in 1939 was worth about 2,560 dollars, thus giving a net income of 1,350 dollars. The annual rate of profit was very high. It amounted to about 60 per cent. for a working year of 160 days, the usual period, and it would have been as much as 88 per cent. if the mill had worked throughout the year. The return from investment in paper making was said to be several times greater than the return from investment in land.

The above example, though it may not be typical, is nevertheless worth consideration, because it suggests one significant fact: in at least some rural areas in Asiatic countries, the poorer peasants, whose holdings are small and who have most need of earning a supplementary income from rural industry, are, in fact, those who earn least from this source; and the opposite is true of the better-off peasants with large holdings and surplus income. While the two different types of rural industry described above—basket weaving and paper making—have together helped to raise the level of income and employment for the village as a whole, they have also tended to increase, instead of reducing the inequality of income distribution among the inhabitants of the village, because of the great difference in the rates of profit they yield.

Another important aspect of the rural industries is the size of the market. In some of these industries, the products manufactured by each household in its spare time are kept mainly for home consumption; only a small amount of surplus out-

¹ Yu-I LI, Hsiao-Tung FEI and Tse-I CHANG: *Three Types of Rural Economy in Yunnan* (New York, Institute of Pacific Relations, 1943), p. 32.

put, if any at all, is disposed of on the market. One outstanding example is the handloom weaving industry in China, India, and other Asiatic countries. The women of rural households generally weave the cloth needed by the members of the family, and sometimes obtain a small amount of cash from the sale of the surplus cloth they produce. It should, however, be pointed out that hand-weaving in these countries is not only a subsidiary occupation in rural areas, but also one of the chief full-time occupations for non-factory industrial workers in both rural and urban areas. Some rural industries minister to the simple needs of the whole village, and sometimes of a few neighbouring villages as well. In other words, they have a clearly defined, though limited market. Carpentry, blacksmithing, pottery, tannery, and oil pressing are examples. In most villages these are full-time occupations, and in some parts of Asia the trade in these products is still by barter. A further stage is reached when the market for a rural industry, though still local in character, extends beyond the village to the adjacent towns and cities. Most of the food and raw-material processing industries belong to this group. Among them may be mentioned rice husking, flour grinding, tobacco manufacture, paper making, cotton ginning, and sugar refining. Hand spinning and weaving may also be placed in this category in so far as the products are sold on the market through dealers. In this case, the nature of the raw materials used and the cost of transport are determining factors.

On the other hand, some rural industries cater for very large markets and a few for the export trade. Sericulture and silk reeling are prominent examples of this group. In certain parts of China, the silk industry constitutes the most important of all rural industrial occupations. Before the war, silk exports provided China with a large amount of foreign exchange and were at the same time a main source of rural income. The silk industry has long been established also in the villages of India and several other Asiatic countries. Among other rural handicraft industries with extensive domestic and foreign markets are those which specialise in the manufacture of artistic luxury products, such as embroideries, carpets, shawls, and certain kinds of metal work. In the Philippines, for instance, embroidery has been a major export industry, which, together with dressmaking, employed over 113,810 work-

ers in 1939, and accounted for over 18 per cent. of the total industrial employment. The embroidery exports in 1939, nearly all of which went to the United States, amounted in value to 10.7 million pesos.

A rural industry which caters mainly for the needs of the producers' own households is naturally little influenced by market conditions, but as soon as it produces for a wider market, the extent of its activity is affected directly by fluctuations in the income of the village in which it is located, and in some cases by changes in the demand in more distant towns and cities; in a few, though important cases, the prosperity of the industry depends directly upon the movement of world demand. The extent to which an Asiatic village may be regarded as an isolated economic unit is therefore determined in part by the types of the local rural industries. Even where an industry is limited to the local market, it may be affected indirectly by outside economic forces, for example, by changes in consumers' tastes.

From the occupational point of view, rural industries in Asiatic countries may be divided into two types: those providing part-time employment for the agriculturists, and those providing full-time employment for the non-agriculturists of the village. Industries of the first type are the more important for maintaining the income and employment of the village as a whole, by providing a supplementary income for the farmers during the slack seasons. Among the many industries of this seasonal type are hand weaving, silk reeling, rice husking, flour milling, and cotton ginning. The full-time village industries (such as blacksmithing and carpentry) are generally small and cannot absorb, to any appreciable degree, the chronically unemployed surplus labour of the village, particularly in the more densely populated areas. Most of the surplus agricultural labour drifts into neighbouring towns and cities to seek employment in handicraft workshops or services of one kind or another.

In contrast to the rural industries, the urban handicraft industries are mostly full-time industrial occupations, though very often they produce more or less the same types of goods. While the productive unit in rural industries is, as a rule, composed of the members of a single family, in urban handicrafts the owner of the workshop often takes on a small num-

ber of hired workers. As a result there has emerged a distinct class of handicraft wage earners which constitutes a large proportion of the urban population in Asiatic countries. The wages of these handicraft workers are kept very low by the constant pressure of the influx of labour from the villages. In China, for instance, the daily cash wages of handicraft workers in Peiping before the war were only 40-60 cents (approximately 13-20 U. S. cents at the then rate of exchange). Notwithstanding these low wages, many of the urban handicraft industries make only a small profit, owing partly to their antiquated productive technique and inefficient management, and partly to competition.

EFFECTS OF THE RISE OF MODERN INDUSTRY

Although they still provide the major part of industrial employment in Asiatic countries, the traditional handicraft industries, both rural and urban, have been declining steadily as a result of competition from modern factory industries at home and abroad. This decline has created a most serious problem of social and economic readjustment with which the countries concerned have been struggling for many decades.

The process is, very briefly, as follows. Machine-made goods are produced at less cost and sold at lower prices than handicraft goods. Consumers prefer the cheaper goods; in some cases, the shift in their demand is also due to a change in popular taste. The result is that some handicraft industries are forced out of existence entirely, and others have to curtail their output and employment and reduce their prices by reducing the wages paid to the workers. In some cases modern factory industries also compete with handicraft industries for the supply of raw materials. For instance, in India the village handicraft tanners are no longer able to secure the best quality hides, as most of these are either exported to meet the increasing demand of modern tanning factories abroad or are bought up by their powerful competitors at home for large-scale production.

Two important examples may be cited to illustrate the complicated industrial readjustment caused by the competition between modern factory and traditional handicraft production.

The Indian Handloom Industry

The case of the Indian handloom industry is of special interest. Up to the first quarter of the 19th century this industry was prosperous: it not only supplied all domestic requirements of cotton cloth, but also possessed an extensive export market because of the excellence of its products. But with the invention of labour-saving textile machinery and the consequent establishment of modern cotton mills in England, the industry was faced with severe competition. The exports suffered first, and inroads were also made in the home market when the opening of the Suez Canal brought about a reduction of transport costs. The first major readjustment forced upon the industry by the cheap imports of cotton fabrics from abroad was the substitution of imported mill-spun yarn for hand-spun yarn.

The repercussions on the handloom industry of the expansion of India's own modern cotton mills require a more detailed analysis. Before 1900 India had few modern cotton mills, and most of them were engaged in the production of cotton yarn mainly for the handloom industry, but partly also for export, particularly to China. The handlooms and the mills were, therefore, complementary rather than competitive in the 19th century. During the 20th century, and especially in the inter-war period, the cotton mills made rapid progress. From 1900-01 to 1938-39 the mill production of cotton cloth registered a nine-fold increase. It should be noted, however, that the expansion of modern cotton weaving during that period was made possible mainly by enhanced tariff protection.¹ This measure also benefited the handloom industry, the output of which expanded from 827 million yards in 1901-02 to 1,265 million yards in 1936-37. But the proportion of the consumption of handloom cloth to the total Indian consumption remained virtually unaltered, because the cloth produced by modern Indian cotton mills replaced imported cloth.

It appears certain that the handloom industry would have been much harder hit had foreign imports remained unchecked

¹ By 1934 the duties on cotton piece-goods imported from the United Kingdom stood at 25 per cent., and on those imported from other countries, at 35-50 per cent. Thus, within a short time, the Government of India raised a fairly high tariff wall to protect the cotton textile industry, and although it has been slightly lowered since, the tariff still ranges from 12.25 to 15 per cent. on British piece-goods, and is fixed at 50 per cent. on piece-goods from other countries.

than it was by the competition from domestic cotton mills under tariff protection. One factor which helped to sustain the activity of the handloom industry was the increase in the total home demand for cotton cloth, due partly to a slight rise in the average level of consumption, but partly to a the steady growth of the population. The changes in the position of the handloom industry brought about by the combination of these various forces during the period 1901-02 to 1936-37 are indicated in table VII. They may be summarised as follows: (a) a slight increase in the volume of output; (b) a sharp decline in the share of the total output of cloth produced by the handloom industry; and (c) the remarkable stability in the proportion of the industry's contribution to the total cloth consumption in the country.

TABLE VII. RELATIVE CONSUMPTION OF IMPORTED, MILL, AND HANDLOOM CLOTH IN INDIA

Year	Net imports		Retained mill production		Handloom production	
	Quantity	Percentage of total	Quantity	Percentage of total	Quantity	Percentage of total
1901-02 ..	2,042	62.7	387	11.9	827	25.4
1906-07 ..	2,193	56.5	588	15.1	1,102	28.4
1911-12 ..	2,362	52.9	1,020	23.8	995	23.3
1916-17 ..	1,771	48.3	1,297	35.4	598	16.3
1921-22 ..	980	28.4	1,529	44.4	938	27.2
1926-27 ..	1,759	34.9	2,068	41.0	1,217	24.1
1931-32 ..	760	15.7	2,768	56.9	1,332	27.4
1936-37 ..	753	14.4	3,220	61.5	1,265	24.1

Source: GOVERNMENT OF INDIA: *Report of the Fact-Finding Committee (Handloom and Mills)* (Delhi, 1942), p. 157.

In spite of the fact that the handloom industry has maintained its level of output since the rise of the modern mill industry, it has suffered severely from the competition and its economic position has greatly deteriorated. Mass production enabled the cotton mills to lower the prices of their cloth very substantially in the latter part of the inter-war period. There

was no corresponding decline in the traditional handloom industry's costs of production. The handloom industry has also had to face growing and even more severe competition from the small-scale powerloom industry, which, although of quite recent origin, owes its success to four main advantages: low capital costs, the economies of mechanical production, freedom from the restrictions imposed by the Factories Act, and freedom from special taxes.

The difficulties encountered by the handloom industry are reflected in the reduction in the number of workers employed and in the drastic fall in the wages of hand-weavers. It has been estimated on the basis of the census returns that the number of workers engaged in this industry decreased from approximately 3.3 million in 1901 to 2.1 million in 1931, or by no less than 36 per cent. No similar estimates are available for the following decade, but it is evident that the downward trend continued during this period. The decline in wages was even more marked. According to a survey of 33 hand-weaving centres in the provinces of Bengal, Bombay, and Madras, the monthly earnings of hand-weavers fell between 1928 and 1941 by 34-38 per cent. in 4 of these centres, by 40-48 per cent. in another 4 centres, by 50-60 per cent. in 12 centres, by 61-70 per cent. in 6 centres, and by 71-81 per cent. in 7 centres. In recent years the earnings of handloom weavers have been particularly low. The great majority of them earned from 4 to 6 annas a day, and the unskilled workers only 2 to 3 annas a day, in 1941. The skill of these workers is undeniable and their capital equipment is in most cases substantial; yet the income of the majority of hand-weavers in India has been reduced to that of an unskilled worker and is perhaps no higher today than that of an agricultural labourer. As many as 90 per cent. of the hand-weavers in Madras and Mysore are reported to be heavily in debt, a sure sign of the inadequacy of their income.

The handloom industry has attempted in certain centres to raise its productivity by such technical improvements as the replacement of throw-shuttle looms by fly-shuttle looms and the introduction of dobbies and jacquards. This is probably one of the reasons why the level of output has been maintained with a much smaller working force. Increasing efforts have also been made to adapt the production to changes in con-

sumers' tastes. But in spite of all these adjustments, there is grave doubt whether the handloom industry, with its present structure and organisation, can survive the competition from the modern mills much longer. Any further expansion in India's modern cotton mill industry will take place mainly at the expense of handloom products instead of, as in the past, at the expense of imports, for the obvious reason that imports of cloth into India have already diminished to a negligible quantity. As the cotton mills are planning to modernise their equipment, intensify the training of technical personnel and operatives for skilled work, and adopt modern methods of management, it seems certain that their productivity will rise rapidly in the future. Similar progress can hardly be expected of the handloom industry, and the cost differentials between the two industries are therefore likely to become larger. The extent to which the handloom industry will be able to maintain its position in the future will depend in part on its ability to make far-reaching improvements in its own organisation and technique, and in part upon the rate of increase in the national income. An expansion of the total effective demand for cotton textiles should give the handloom industry some chance of survival, at least for a time.

The experience of the handloom industry in India has been described at some length, not only because of its importance in the industrial structure of India but because a similar process of readjustment has been taking place in the handi-craft cotton textile industry in many other Asiatic countries, consequent upon the advent of modern cotton mills at home and abroad. In China, as in India, it was also the hand-spinning industry which was the first to be affected by the competition from modern mills. The latter have now become the main suppliers of cotton yarn to the Chinese hand-weavers. The Chinese hand-weaving industry started to decline rapidly in the early 'thirties, particularly in Kao-Yang, the well-known hand-weaving centre in Hopei province, and many independent weaving families have been forced out of business or have taken to working for the local cloth shops: the proportion of the independent weavers to the total number of hand-weaving families in Kao-Yang fell from 65.5 per cent. in 1912 to 10 per cent. in 1933, while that of weavers in paid employment rose from 24.5 to 90 per cent.

The Chinese Silk Industry

The Chinese traditional silk industry provides another outstanding example of the decline of the older forms of industry. It differs in several important respects from the Indian handloom industry. Unlike the latter, which is mainly a full-time industrial occupation, the traditional silk industry in China, as indicated before, is primarily a rural industry providing part-time employment and a supplementary income for the villagers. The Indian handloom industry produces for home markets, but the Chinese traditional silk industry produces mainly for export. As has been seen above, the cotton handloom industry is now dependent upon modern mills for the supply of raw materials, but in the silk industry the position is reversed. The modern silk factories have to rely on the rural industry for their supply of cocoons.

The first stage of silk production, that of raising silkworms and cocoons, is in the hands of the rural industry; in the second stage, silk reeling, the rural industry and the modern factories are in competition with each other.

Because of these special features, the forces working towards the decline of the Chinese rural silk industry are more complex than those operating in the case of the Indian handloom industry. In analysing the process of the decline in recent decades, it is essential to distinguish between the cyclical and the long-term competitive forces in operation. The sudden prostration of the rural silk industry in the early 'thirties was due mainly to the drastic fall in the world demand for raw silk caused by the world economic depression. In 1934, for instance, the price of silk fell to only one third of the 1930 figure. But the decline of the industry had begun much earlier, and it continued throughout the subsequent period of world recovery. The reason for this secular downward trend must be sought in the long-term competitive forces that were at work. There were at least three such forces acting simultaneously. First, the establishment of modern silk reeling factories in China's own industrial centres. This was a severe blow to the traditional rural silk industry, since machine-reeled silk is far superior in quality to the hand-reeled product, particularly as regards lustre, uniformity of fineness, and resistance to breakage. Secondly, during the inter-war period, Japan

emerged as a strong competitor to the Chinese silk industry in the export markets, especially in the United States. Before 1909 China exported more silk than Japan, but by the early 'thirties Japanese silk exports had come to be nearly three times as large as those from China. The shrinkage of the export market had a greater adverse effect upon China's traditional rural silk industry than upon its modern silk factories, owing to the inferior quality of the rural product. Finally, the decline of the Chinese rural silk industry was also due in part to competition from the newly developed synthetic fibre industries abroad, which have made increasing inroads into the markets for natural silk.

There was little that could be done to offset the impact of these forces on the Chinese rural silk reeling industry. Inasmuch as its competition with foreign producers was mainly in export markets, its decline could not, like that of the Indian handloom industry, be arrested by tariff protection, and probably not even by subsidy because of the inferior quality of the product. For the same reason, the displacement of hand-reeled silk by machine-reeled silk on the home market could not be stopped. The Indian handloom industry enjoys certain advantages over the modern mills so far as the production of luxury goods is concerned. The Chinese traditional rural silk reeling industry has no such special resources. But even though hand-reeling as a village occupation were to disappear, this would not necessarily involve the complete elimination of the rural silk industry as a source of rural income. The villages would undoubtedly continue to produce cocoons for the modern silk reeling factories in the industrial centres. The prosperity of the readapted rural silk industry would depend to a large extent upon the prosperity of the domestic machine-reeling industry, which, in turn, would depend in part on its ability to compete successfully in the world market with foreign producers of natural as well as artificial silk.

CHAPTER IV

MODERN INDUSTRY

In the following pages a short account is given of the mineral and power resources of Asiatic countries of the Far Eastern region and of the extent to which modern industries have been developed on the basis of these resources. The effects of this development on the foreign trade of these countries are then discussed. The concluding sections of the chapter describe the part played by foreign or outside capital in developing the resources and call attention to some of the principal factors which have favoured or retarded the growth of modern industry.

MINERAL AND POWER RESOURCES

Any estimation of the mineral resources of Asiatic countries is beset with particular difficulty. Where mining is still pursued by primitive methods, as in parts of China, there is little specific information available concerning the quantity and quality of ore reserves. Most quantitative evaluations of mineral reserves refer only to areas definitely known to contain higher-grade ores and ignore the existence of lower-grade ores which could, with improvements in technique or methods of exploitation, be economically worked in the future. For these reasons the following survey is perforce very incomplete. It is probable that additional resources exist which will be brought to light by future surveys.

The latest estimate made for China by the National Geological Survey, in 1942, places the country's iron reserves at 1,694 million tons; over two thirds of this total consist of the low-grade deposits of Manchuria, with an average iron content of about 35 per cent. The other deposits have a high iron content, from 60 to 63 per cent. However, these deposits give China only about 4 tons per head of population as compared

with the United States figure of 38 tons. Since the above estimates were made, new deposits have been discovered in Manchuria, estimated variously at 100 million and 1,300 million tons. Coal reserves are estimated at about 240,000 million tons; they should be sufficient for China's needs for a long time; only 8 per cent. of these deposits are located in Manchuria. Manganese ores are estimated at 22.5 million tons, tungsten ores at 1 million tons, and pure antimony at 3.6 million tons. In addition, there are large deposits of tin ore and bauxite and smaller amounts of copper, lead, zinc, and other minerals. The oil reserves are reported to total 4,337 million barrels—about one quarter of the figure for the United States, which has the largest oil reserves in the world. Hydro-electric power, when developed, is estimated to be able to provide 22 million hp. during 95 per cent. of the year and 41 million hp. during 50 per cent. of the year.

The iron ore reserves of India are estimated to be about 3,000 million tons, or three fourths the size of the United States deposits, but they are of a higher grade, with an average iron content of 64 per cent. Coal reserves are reckoned at 36,000 to 60,000 million tons, of which 5,000 million tons are of high quality, including 1,400 million tons of coking coal. There are also very large deposits of manganese and considerable deposits of high-grade bauxite, chromite, mica, copper ore, magnesite, and other minerals. Potential hydro-electric power is estimated at 27 million hp., second only to that of the United States.

Siam possesses abundant reserves of minerals, among which may be mentioned cassiterite (tin ore), wolfram and scheelite (tungsten ores), antimony, iron, gold, copper, lead, zinc, molybdenum, sapphires and zircons. Of these, however, only tin and wolfram ores are mined on a commercial basis, while gold, antimony, and precious stones are produced on a small scale. Iron is widely distributed throughout the country in the form of magnetite, hematite, and limonite. The working of one of these deposits has been begun and it is expected that the country's requirements of steel could be met locally in the near future. As regards coal, there are low-grade lignite deposits of tertiary age. Power is at present derived mainly from firewood from the dense forests covering the country; however, efforts are being made to utilise the swift mountain streams.

for hydro-electric power development, though an extensive programme may prove impracticable on account of the flatness of the land in the central and north-eastern sections.

No estimates of Burma's resources are available, but it is known that it has considerable deposits of oil, lead, tungsten ore, tin ore, silver, and zinc. It has no known reserves of coal or iron.

Ceylon has a variety of minerals, but, with the exception of graphite, none of them in really substantial quantities. Graphite is found in veins from a few inches to several feet in width, either pure or in association with other minerals. Precious stones, such as sapphires and rubies, and semi-precious stones, such as cat's eyes, alexandrites, aquamarines, topazes, tourmalines, zircons, spinels, and garnets, are found in considerable quantities, almost entirely in alluvial gravels. Such gravels also contain various thorium and uranium-bearing minerals, the most important of which is thorianite. At various points along the coast there are "black sands", natural concentrates of the minerals ilmenite, monazite, and zircon; the black colour is caused by the predominance of ilmenite. One deposit at Pulmoddai, 35 miles north of Trincomalee, is estimated to contain at least 3.5 million tons of ilmenite. Moderate quantities of phlogopite mica of good quality occur in association with crystalline limestones. Large quantities of kaolin and glass sands are found in different parts of the island, and iron ore, magnesite, and a few other, minor, minerals exist in small quantities. If all the available hydro-electric power resources were utilised, it would be possible to generate 1 million hp. a year. The existing electric supply systems use fuel as a source of energy and generate 31 million hp. a year.

Anthracite deposits in Indo-China are very extensive and easily worked. The known reserves are estimated at more than 120 million metric tons, and there are also large reserves of soft coal in different parts of the country. Considerable deposits of tin occur in several places, and there are smaller deposits of zinc, iron, manganese, tungsten, lead, and phosphate. These various resources have not yet been exploited to any great extent. The country is mountainous and has large potential hydro-electric power resources in the numerous rivers; the rainfall is adequate to maintain the electric supply* throughout the year.

Extensive tin and petroleum deposits have long been exploited in Indonesia, but other resources, including valuable deposits of medium-grade iron ore, bauxite, manganese, gold and silver, are so widely dispersed that substantial capital investment would be required for their development. There are fairly large reserves of coal, but hardly any suitable for coking. Potential hydro-electric power is considered to be relatively large.

Malaya is rich in minerals, the principal metals mined being tin, tungsten, gold, and coal. Even though the tin mines have been worked intensively, considerable reserves of tin ore are still available. Valuable deposits of iron ore, bauxite, manganese, phosphates, and other minerals are known to exist.

High-grade iron ore deposits in the Philippines are reported to be small—about 10 million tons. There are deposits of 500-1,000 million tons of low-grade ore, but they would be very expensive to work. The coal deposits are small, and seven eighths of the country's coal supply has to be imported. Chrome ore deposits are estimated at 10.5 million tons, and the Masinloc reserves are the largest known deposits of chrome ore in the world. Gold is mined in large quantities. Copper and manganese also exist in small quantities. Although the possibilities of developing hydro-electric power are reported to be large, the cost of exploiting them would be exorbitant. The lack of cheap electric power is obviously an obstacle to industrial development.

The rich deposits of nickel and chrome ore in New Caledonia should also be mentioned. New Caledonia is the world's second largest producer of nickel ore, next only to Canada, and is one of the leading producers of chrome ore. In 1938 it produced 12,900 metric tons of nickel ore, or about 11 per cent. of the world output, and 26,700 metric tons of chrome ore, or 5 per cent. of the world output.

The Asiatic countries of the Far Eastern region thus possess sufficient resources to attain a considerable degree of industrial development. These resources must, of course, be considered in relation to the large populations of the areas concerned. The statistics of actual production in recent years given below show, however, that on the whole these resources have as yet scarcely been touched. It is reasonable to suppose that if they are developed fully, the standard of life of the population can be raised considerably above its present low level.

SCOPE AND STRUCTURE OF MODERN INDUSTRY

In most Asiatic countries, modern industrial development, notwithstanding its effects on the traditional industries, is as yet very limited in scope. Industries using power-driven machinery and large-scale methods of production still account for only a small proportion of total industrial employment and output. The rough estimates given in the preceding chapter suggest that in none of the countries mentioned was the number of factory workers before the Second World War much more than 10 to 15 per cent. of the total number of industrial workers. The ratio of the output of modern industrial establishments to total industrial output in most of these countries cannot be precisely determined for lack of the necessary data, but it is probably very low. Out of an estimated average annual national income of 35,200 million dollars in China during the period 1929-1934, the output of modern industrial establishments accounted for only 800 million dollars, or approximately 2 per cent., as compared with the output of traditional industries and other trades, valued at 6,000 million dollars, or 17 per cent. of the total.

Comparison with the position in advanced industrial countries reveals even more strikingly the underdevelopment of modern industry in Asiatic countries. Industrial capital forms a large part of a country's total stock of real capital, and the latter figure is therefore a fairly good index of the degree of industrial development. It has been estimated that during the period 1935-1938 real capital per head of the working population in terms of international units¹ was 180 in China, 580 in India, and 380 in the rest of Asia and Oceania exclusive of Australia and New Zealand, as contrasted with 5,000 in the United Kingdom, 4,400 in Australia, 4,360 in the United States, 4,240 in Canada, 2,740 in France, and 1,350 in Japan. The same difference between the two groups of countries appears in the figures of factory output. During the period 1926-1929 the annual average gross value per head in U. S. dollars of factory production other than foodstuffs for the populations of China and India taken together is estimated to have amounted to only \$2, as compared with \$262 in the United States, \$154 in the United Kingdom, \$134 in Germany, \$120 in France, and \$46 in Japan. The

¹ See above, p. 1.

average annual value of factory output in India at 1926-1929 prices was about U.S.\$1.5 per head in 1896-1900 and U.S. \$4.9 in 1936-1938. The rate of increase in absolute terms was thus exceedingly slow. It has not been found possible to make similar comparisons for other Asiatic countries, but there seems little doubt that before the Second World War modern industry played as limited a role in their economies as it did in China and in India.

The relative importance of mining and manufacturing in the modern industrial development of China and India up to the outbreak of the last war differed markedly from that in other Asiatic countries. In both China and India, modern industry consists mainly of manufacturing, and mining plays only a minor role. Of the total number of persons engaged in factory production and mining in the Indian provinces and States in 1938, over 83 per cent. were employed in factories and only 17 per cent. in mines. Comparative figures are not available for China, but it is generally known that before the war the modern mining industry was even less developed than manufacturing. In most other Asiatic countries, the position seems to be reversed: the mining industry is much more developed than manufacturing and provides a far greater share of modern industrial output and employment than it does in China or India. The number of workers employed in modern mining in Indo-China represented about 39 per cent. of the total employed in modern industry in 1938 (47,000 out of 120,000 workers). During the late 'thirties the mining industry in Indonesia employed some 600,000 workers, nearly twice as many as those employed in large-scale factory industry. Modern mining holds a similarly prominent place in the economies of Siam, Burma, Malaya, and, to a smaller extent, the Philippines. The relatively greater importance of mining in the modern industrial structure of all these countries is due partly to their wealth of certain mineral resources, but mainly to the undeveloped state of their modern manufactures, which have only recently been established.

Mining

The figures for China's output of the chief mineral products before the war are given in table VIII. Several features deserve special notice. The production of basic minerals is small.

TABLE VIII. MINERAL PRODUCTION IN CHINA

Mineral	Year	Metric tons
Coal	1936	34,250,000 ¹
Iron ore:	1934	
Modern mines		2,135,000 ²
Native mines		409,000
Mineral oil (gallons)	1936	28,454,000 ³
Copper	1934	400
Lead ore	1934	6,600
Tungsten ore	1936	7,000
Antimony (regulus)	1936	13,000
Tin	1936	11,000

Source: *Chinese Year Book, 1944-45* (Shanghai, 1946), pp. 654-660 (estimates of the Geological Survey of China).

¹Including 12,000,000 tons produced in Manchuria. ²Including 1,185,000 tons produced in Manchuria. ³Including 28,344,000 gallons produced in Manchuria.

The coal output per head in 1940 amounted to only about 0.07 metric tons as compared with 4.75 tons in the United States. The output of iron ore and of mineral oil was even smaller. Another outstanding feature is the importance of Manchuria in China's mineral production. Immediately before the war Manchuria accounted for 35 per cent. of the total output of coal, 55 per cent. of the iron ore, and over 99 per cent. of the mineral oil. As Manchuria was under Japanese occupation during the 'thirties, the major part of the output of these three basic minerals during this period was not available for China's own use. China has been the world's largest producer of antimony and tungsten; the production before the war amounted to about 40 per cent. of the world's output of tungsten and 60-90 per cent. of the antimony.

Mineral production in India before the war was also small, both in terms of output per head and in the share it formed of the country's total modern industrial production. Table IX gives the volume of employment and the value and quantity of output in 1938 for various mining industries. It will be seen that, as in China, coal mining is by far the most important mining industry, accounting for approximately half the total employment in mining of all kinds and half the total value of mineral production. But the coal output per head is quite small; in 1940 it was estimated at 0.07 tons, a figure very close to that for pre-war China. The production of iron ore in India before the war was not much greater than in China,

TABLE IX. PRINCIPAL MINING INDUSTRIES IN INDIA¹, 1938

Minera	Number of persons employed ²	Production	
		Value	Quantity
		,000 rupees	
Coal	226,887	106,424	28,342,906 tons
Salt	57,665	*	*
Manganese ore	34,080	40,051	992,795 "
Mica ³	31,066	4,204	123,169 cwts
Gold	24,200	30,475	321,138 oz.
Iron ore	19,577	4,857	2,743,675 tons
Petroleum	7,655	16,543	87,082,371 galls.
Copper (ore and matte)	2,743	3,240	288,127 tons
Chromite	1,958	682	44,149 "
Magnesite	1,686	160	25,611 "
Diamond ⁴	1,005	69	1,729 carats
Ilmenite	4,856	1,546	252,220 tons
Monazite		233	5,221 "
Zircon		40	1,450 "
Silver	*	30	22,295 oz.
Graphite	*	20	458 tons

Source: *Statistical Abstract for British India, 1930-31 to 1939-40* (London, 1943), pp. 575-588.

¹Including both provinces and States. ²Average number of persons employed daily in the production of minerals from mines for which reliable returns of labour statistics are available. ³Figures for value and quantity of production relate to dressed mica only and are incomplete. ⁴Figures incomplete.

*Figures not available.

including Manchuria. India produced about three times more petroleum in 1938 (after the separation of Burma) than China did in 1936. Of greater significance is the prominent place of manganese ore, mica, and gold in India's mineral production. Next to coal and salt, these are the three largest mining industries in terms of employment. India was at one time one of the world's leading producers of manganese. Its share in world production was as high as 41 per cent. during the period 1909-1913, but in the last few decades the production in Russia has increased considerably; during 1934-1938, India produced only 17 per cent. of the world output. India also supplies the world market with large quantities of mica, ilmenite, and monazite.

The South-east Asia region as a whole is noted for the production of tin, although the importance of tin as compared with other mineral production varies considerably in different

parts of the region. The metal content of the tin ore produced in 1939 in Siam was 16,200 metric tons, in Burma 5,400, in Indo-China 1,500, in Indonesia 28,300, and in Malaya 54,200.¹ Among world tin producers, Malaya ranks first, Indonesia second, Bolivia third, Siam fourth, and China fifth.

The output of the Siamese mines other than tin mines has hitherto been very small. The total value of the tin produced is about 4 million ticals a year.

The important role of mining in the economy of Burma is reflected in the large amount of outside investment in mining companies—about £31 million up to 1940—as against only £5.5 million in banking, trade and manufacturing. The dominant position among the various mining industries is held by petroleum, which accounts for over half the total outside capital invested in mining. Other important mineral products are lead ore, tungsten ore, tin ore, silver, and zinc concentrates. The average annual volume and value of production during the period 1934-1938 for these and other minerals are shown in table X.

TABLE X. MINERAL PRODUCTION IN BURMA, ANNUAL AVERAGE 1934-1938

		Volume	Value
			£
Petroleum ..	..	262,000,000 galls.	3,871,350
Lead ..	..	73,687 tons	1,219,233
Tungsten ore ..	..	4,414 "	419,982
Tin ore ..	..	6,216 "	744,300
Silver ..	..	5,943,000 oz	582,010
Zinc concentrates ..	..	71,706 tons	285,817
Copper matte ..	..	8,220 "	163,663
Nickel speiss ..	..	4,032 "	98,062
Antimonial lead ..	..	1,269 "	24,493
Iron ore ..	..	23,361 "	7,018
Gold ..	..	1,205 oz	7,089
Rubies and sapphires ..	..	131,499 carats	7,346

Source: Sir Lewis FERMOR: "Burma's Mineral Resources and the War", in *Asiatic Review*, Vol. XXXVII, No. 129, Jan. 1941, pp. 158-159.

Plumbago is the only mineral, apart from gems, mined on a large scale in Ceylon. Though the two world wars brought a boom to the industry, it suffered during the inter-war years from price fluctuations. In 1940, it employed 18,000 workers

¹ According to information supplied by the Government of the Malayan Union, Siam exported 16,970 long tons of metallic tin in 1939, Burma 5,964, Indonesia 31,410, and Malaya 56,000.

and produced 24,003 tons for export (valued at 5,739,146 rupees), but in 1946 not more than 1,785 workers were employed, and 8,082 tons (valued at 3,521,847 rupees) were exported. There are only 6 large mines using modern mechanical devices.

Coal is the most important mineral mined in Indo-China. Coal production in 1937 was approximately 2.3 million metric tons, or in value about 63 per cent. of the total mineral output. Zinc ore is mined on a much smaller scale, and this industry has declined steadily since the middle of the 'twenties. By 1937 production had fallen to 10,600 tons from a peak volume of 61,900 tons in 1926.

Indonesia is the largest producer of petroleum in the Far East. In 1939 this industry employed 30,849 workers, while those employed in the tin industry numbered about 20,000. The production of crude oil increased rapidly during the 'thirties, from 4.7 million metric tons in 1931 to 7.4 million in 1938, when it formed about 3 per cent. of world oil production. The production of coal, bauxite, and manganese is of much less importance. Coal is mined mainly for local consumption. The mining of bauxite was begun only in 1935, and in 1939 the production amounted to about 246,000 tons.

Tin ore accounted for 83 per cent. of the value of Malayan mineral production in the period 1934-1938. The production of tin ore (metallic tin) in 1939 was 46,827 long tons. In the same year Malaya also produced 1,942,521 tons of iron ore, 441,025 tons of coal, 514 tons of tungsten ore, 92,256 tons of bauxite, 31,448 tons of manganese, 11,098 tons of ilmenite (export figure) 494 tons of kaolin, and 41,165 tons of gold. The total number of workers employed in the mining industry was 88,051, most of them in the tin mines; more than 75 per cent. of this total were Chinese, and the rest were Indians, Malays, and Siamese.

The 'thirties saw a marked expansion of the mining industry in the Philippines. The most important mines are the gold mines. After the passage of the United States Gold Reserve Act of 1934, which raised the statutory price of gold to \$35 per fine ounce, the gold mining industry in the Philippines expanded rapidly until 1940, when gold output amounted to 1.1 million fine ounces valued at 76.8 million pesos, as compared with 182,000 fine ounces valued at 7.5 million pesos in 1931. Other

mining industries, though less important, also progressed rapidly during this period. Under the stimulus of Japanese buying there was a considerable increase in the production of iron ore. Between 1936 and 1939 the output of coal rose from 24,706 tons to 55,585 tons, that of chrome ore from 6,645 tons to 186,002 tons, and that of copper concentrates from 5 tons to 7,957 tons. The production of copper ore increased from 13,000 tons in 1937 to 29,874 tons in 1940. Particulars of the total mineral production of the Philippines are given in table XI.

TABLE XI. TOTAL VALUE AND VOLUME OF PHILIPPINE MINERAL PRODUCTION DURING THE FIVE YEARS 1936-1940

					Volume	Value
						pesos
Gold .. .. .	..	..	..	..	4,352,659 oz.	303,140,679
Iron ore .. .. .	..	..	..	..	4,505,542 tons.	18,383,363
Copper concentrates	..	..	..	..	20,144 „	7,521,540
Chrome ore .. .. .	..	..	..	..	444,667 „	7,460,438
Silver .. .. .	..	..	..	..	5,145,964 oz.	7,091,946
Manganese .. .. .	..	..	..	..	167,470 tons.	3,664,489
Copper ore .. .. .	..	..	..	..	85,940 „	2,273,852
Lead, zinc .. .. .	..	..	..	..	---	313,001
						349,849,308

Source : *Philippine Mining Year Book*, 1941, p. 48.

The relative importance of mining in the structure of modern industry in Asiatic countries not only varies greatly from country to country; there are also marked differences in the types of minerals they produce. Most of them have so far concentrated on exploiting those mineral resources of which they have a relatively abundant supply. From the standpoint of future industrial development, three main points call for consideration. First, what are the potential reserves of those minerals which have already been mined on a large scale, such as tin in Malaya and petroleum in Indonesia, and how far can these mining industries be further expanded? Secondly, assuming that these industries are physically capable of further expansion, would it be in the interest of the countries concerned to develop them still further, having regard to the underlying conditions of world demand for and supply of these minerals? Thirdly, in view of the uneven distribution of the different types of minerals, might it not be greatly to the advantage of the countries

concerned, and in the long run, to the rest of the world as a whole, to co-ordinate closely their various programmes for the development of mining industries?

Manufacturing

Producers' Goods Industries.

A striking feature of the structure of modern manufacturing industry in most Asiatic countries is the very small part played by the basic producers' goods industries, particularly iron and steel and other metallurgical industries and the engineering and chemical industries.

These basic industries were only very slightly developed in China (excluding Manchuria) before the Second World War. Pig iron production in 1936 amounted to only 155,640 tons and the pre-war annual steel output was estimated at as little as 50,000 tons. The modern engineering industry in China consisted mostly of small-scale machine shops engaged primarily in repair and assembly work; limited quantities of lighter types of machinery, such as agricultural implements, pumps, lathes, and steam and petrol engines were also produced. Industries producing basic chemicals, such as acids, alkalis, and nitrogen products, were just beginning to be established, and their output met only a negligible part of the country's small demand for chemicals. Over 100,000 piculs of acid a year were imported before the war.

Industrialisation in Manchuria, however, advanced rapidly during the 14 years of Japanese occupation. In particular, the basic producers' goods industries were developed as an integral part of Japan's war production programme. Along with the intensified exploitation of mineral resources, there was a marked expansion of the metallurgical, engineering, chemical, and electric power industries during the 'thirties. By 1937, the year of the outbreak of the Sino-Japanese War, the output of pig iron had reached 762,000 metric tons, or 120 per cent. above the 1931 level. Between 1935 and 1937 the output of steel ingots rose from 137,000 to 427,000 metric tons, and the output of steel manufactures from 25,000 to 370,000 metric tons. The output of sulphate of ammonia amounted to 179,033 tons in 1937, compared with 28,948 tons in 1933. The generation of electricity increased from 593 million kwh. in 1932

to 1,600 million kwh. in 1937. The relative importance of the basic producers' goods industries in the structure of modern manufacturing industry in Manchuria in 1936 may be seen from table XII, which gives the percentage distribution by value of the output of different industries. It is not yet known how much of the modern industrial equipment in Manchuria escaped wartime destruction and is in productive use at the present time.

TABLE XII. MANUFACTURING PRODUCTION IN MANCHURIA, 1936

Industrial group	No. of factories	Value of production	
		Million yen	Percentage of total
Chemicals	932	167.2	21.3
Foodstuffs	1,208	165.7	21.0
Metals	986	151.9	19.3
Textiles	2,065	111.0	14.1
Machinery and tools	628	50.4	6.4
Ceramics	583	28.4	3.6
Lumber and woodworking	654	24.9	3.2
Printing and bookbinding	434	15.0	1.9
Miscellaneous	1,540	72.3	9.2
Total	9,030	786.8	100.0

Source: *Japan-Manchukuo Year Book*, 1940.

Factory production is more diversified in India than in most other Asiatic countries. Private mineral and metal processing industries accounted for only 3.2 per cent., and private engineering industries for no more than 8.5 per cent., of total factory employment in 1939. Railway workshops accounted for about 30 per cent. of employment in the engineering group. In 1938-39 India produced about 1 million tons of steel ingots, 804,469 tons of finished steel, and 1.8 million tons of pig iron: 28 per cent. of the pig iron was exported. These figures, though notable for a country in the early stages of industrial development, were small in comparison with the 1937 steel production of 51.4 million metric tons in the United States, 19.3 million in Germany, 17.7 million in the U.S.S.R., 13.2 million in the United Kingdom, 7.9 million in France, and 5.8 million in Japan. India produced very little machinery before the war,

and most of the requirements for modern machinery were obtained from abroad. The manufacture of chemicals was also inconsiderable; the number of workers employed in the industry was 4,750 in 1939, or only 0.27 per cent. of the total number in factory employment.

In most other Asiatic countries basic producers' goods industries are either virtually non-existent or are confined to the preliminary processing of one or two minerals or raw materials, mainly for export.

Consumers' Goods Industries.

Consumers' goods industries of various kinds form the greater part of modern manufacturing industry in all Asiatic countries of the Far Eastern region.

The structure of manufacturing industry in China before the Second World War and the respective contributions of factory and handicraft production to net output in each industry are indicated in table XIII, which also shows the number of factories and the percentage of factory workers in each

TABLE XIII. STRUCTURE OF MANUFACTURING INDUSTRY IN CHINA, 1933

Industrial group	Net output (\$ millions)			Number of factories	Factory workers	
	Factory	Handicraft	Total		Number (thousands)	Percentage of total
Textiles ..	154	258	412	859	459	60.0
Food, drink and tobacco ..	67	702	769	547	72	9.5
Chemicals ..	28	22	50	184	49	6.5
Ships and vehicles ..	14	41	55	56	41	5.4
Engineering ..	22	4	26	236	38	5.0
Clay and stone ..	20	54	74	120	24	3.2
Paper and printing	21	56	77	269	23	3.0
Clothing ..	15	82	97	165	17	2.2
Leather and rubber	12	37	49	99	16	2.1
Metal products ..	13	7	20	82	7	0.9
Electrical apparatus	6	1	7	63	6	0.8
Scientific instruments	3	3	6	74	4	0.5
Timber ..	1	46	47	27	3	0.4
Miscellaneous ..	2	26	28	43	4	0.5
Total ..	378	1,339	1,717	2,824	763	100.0

Source: Pao-san Ou and Foh-Shen WANG, *loc. cit.*, p. 431.

case. More than half the total factory employment was in the textile industry. As in India, the largest branch of the textile industry was cotton manufacturing, which had a productive capacity large enough to meet the bulk of China's domestic cotton yarn and cloth requirements. In the immediate pre-war years the textile industry of China (including Manchuria) produced annually about 122 million lbs. of cotton yarn and 1,200 million yards of cotton cloth (about two fifths of the Indian mill production of cotton cloth in 1936-37). The second largest textile branch was silk reeling, which held the same position as jute manufacturing in India: both are export industries. In the next important group, the food, drink and tobacco industries, the largest was the flour milling industry, with a paid-up capital amounting to one third of that for all food factories in China (including Manchuria) that came under the Factory Act. The output of the 66 modern flour mills in question was, however, only about 65 million bags of flour a year, or less than one fifth of the country's annual consumption; the traditional handicraft flour industry and, to a smaller extent, imports met the remainder of the country's requirements. In other branches of the modern food industry, including rice milling, oil pressing, and egg freezing, most of the undertakings were small. The chemicals group consisted chiefly of match manufacturing; the production of industrial chemicals was very small.

The electric power industry, though the third largest factory industry in capital investment, was small in terms of output and was concentrated in a few industrial centres. In 1936 public utility power plants in China (excluding Manchuria) produced approximately 1.7 million kwh., of which 47 per cent. was for industrial use. Industrial power plants generated about 700,000 kwh. Although the country's potential water-power resources are large, the capacity of the hydro-electric plants in 1936 amounted to 3,200 kw., or less than 0.5 per cent. of the total electric capacity.

The relative importance of different manufacturing industries in the Indian provinces is shown in the distribution of factory employment in 1939, particulars of which are given in table XIV. The textile group alone accounted for 46.5 per cent. of total factory employment. In addition some 133,000 persons (in 1937) were engaged in cotton ginning, so that at

TABLE XIV. AVERAGE DAILY NUMBER OF WORKERS EMPLOYED IN DIFFERENT INDUSTRIES IN THE INDIAN PROVINCES, 1939

(Factories subject to the Factories Act)

Industry group	No. of workers			Percentage of total
	In perennial factories	In seasonal factories	Total	
Textiles	817,077	..	817,077	46.5
Food, drink and tobacco ..	97,407	150,048	247,455	14.1
Gins and presses	25,987	137,239	163,226	9.3
Engineering	148,424	..	148,424	8.5
Government factories ..	131,066	1,380	132,446	7.6
Chemicals, dyes, etc. ..	55,945	1,989	57,934	3.4
Processing of minerals and metals	55,123	..	55,123	3.2
Processing of wood, stone and glass.	52,290	..	52,290	3.0
Paper and printing ..	44,377	..	44,377	2.6
Processing of skin and hides	12,906	..	12,906	0.7
Miscellaneous	19,712	167	19,879	1.1
Total ..	1,460,314	290,823	1,751,137	100.00

Source: *Statistical Abstract of British India, 1930-31 to 1939-40, op. cit.*, pp. 598-605.

least half the factory workers were directly or indirectly engaged in the manufacture of textiles. The two largest textile industries are cotton spinning and weaving and jute manufacturing, which in 1939 employed 486,853 and 298,967 workers, respectively, together representing 96 per cent. of the total textile employment. Next in importance is the food, drink and tobacco group of industries, headed by the sugar refining (77,491 workers in 1939), tea processing (67,303), and rice milling (47,446) industries. Employment in sugar refining and tea processing is seasonal in character. The principal capital goods industries are those related to the repair and manufacture of transport equipment, especially the railway workshops. These industries accounted for about half the employment in the engineering group and 47 per cent. of the employment in Government factories. Other industries are of less importance; together they accounted for about 14 per cent. of the total factory employment in 1939.

Until recently, modern manufacturing in other Asiatic countries of the Far Eastern region was mainly confined to the pre-

cessing of a few kinds of raw materials which the countries concerned had in great abundance.

The only important manufacturing industries developed hitherto in Siam are rice milling and saw-milling. During the 'thirties, the Government encouraged the establishment of various new industries such as brewing and the manufacture of cement, and itself undertook the financing and management of certain others, such as the manufacture of cigarettes, sugar, textiles, and paper, and the distillation of alcohol and spirits.

The most important factory industry in Burma before the war was rice milling, which employed 41,564 persons in 1938, or nearly half the total number in factory employment. The three next largest factory industries were saw-milling (12,000-13,000 workers), petroleum refining (9,000-10,000 workers) and textile manufacturing (7,000 workers). Industries of minor importance included the tanning of leather and the making of furniture, leather goods, trunks, soap, aluminium ware, matches, etc.

The principal modern industries in Ceylon are those associated with the processing of tea, coconuts, and rubber for export. The few industries set up in recent years were established either to meet wartime shortages (matches, cigarettes, soap, glass, etc.) or as Government pilot factories (plywood, quinine, acetic acid, paper, etc.). Twelve match factories meet the total requirements of the island. There are 2 glass factories. The bulk of the tobacco required for the manufacture of cigarettes is imported, but locally grown coconuts are used in the manufacture of soap. Before the war, Ceylon had only one cotton mill, with an annual production of approximately 6 million yards; over 90 per cent. of the cloth requirements were met by imports, which in 1940 amounted to about 84 million yards. There were in 1940 about 50 electric supply systems generating 31 million units a year.

Modern manufacturing industry in Indo-China, though still very limited before the war, was somewhat more extensive than in Siam and Burma. The major processing industries based on local raw materials were rice husking and polishing, the distillation of alcohol, and saw-milling. There were also a number of match and paper factories. With the rapid expansion of building activities, industries manufacturing building materials grew steadily. By the late 'thirties the cement in-

dustry was not only able to supply most of the domestic requirements, but exported large quantities to other parts of Asia. A modern cotton textile industry was also established, but the domestic output of raw cotton was far from sufficient to meet the demand, and supplies had to be imported from the United States, China, and India. Several other processing industries made substantial advances during the 'thirties. There was a particularly marked expansion of sugar refining, and a beginning was made with the preliminary processing of rubber.

Indonesia presents an interesting case study in industrial development. Before the depression of the early 'thirties, the major factory industries, as elsewhere in South-east Asia, were those associated with the processing of local agricultural and mineral products. While most of the locally produced tin ore was shipped abroad before being processed, the bulk of the crude oil was refined into various petroleum products before it was exported to world markets. The petroleum refining industry in Indonesia has been developed to quite a considerable extent: in 1939, over 90 per cent. of the crude oil output was treated in local refineries before export. Sugar milling is another type of modern industrial enterprise of long standing. Before the depression there were 188 factories engaged in the milling of sugar cane, employing more than 60,000 permanent workers, with a peak output of nearly 3 million metric tons of sugar in 1928. The effects of the depression on the industry were serious, but it nevertheless remained one of the largest processing industries in Indonesia. Among other less important processing industries were the hulling of rice, the preliminary processing of rubber, the extraction of oil from coconuts and palm seeds, and the preparation of tea and coffee.

A most interesting feature of the industrial development of Indonesia, however, was the Government's policy of industrialisation, pursued during the 'thirties as a means of counteracting the forces of the depression and promoting internal economic stability. The Government aimed both at the expansion of large-scale factory industries and at the revival and modernisation of the small-scale traditional handicraft industries. The result was a rapid increase in the number of industrial undertakings and in factory employment during the 'thirties. The number of mechanised factories rose from 4,800

in 1935 to 6,100 in 1939, and fully 55,000 workers were estimated to have been assimilated yearly into factory industry in the late 'thirties.

Two further points may be noted regarding industrial development in Indonesia during the 'thirties. First, the growth of factory industries during the period was limited primarily to the consumers' goods industries, particularly in respect of textiles, foodstuffs and tobacco, as is shown in table XV.

TABLE XV. STRUCTURE OF FACTORY INDUSTRY IN INDONESIA.
1940

Industry	Number of factories		Number of workers	Average number of workers per factory
	Java	Other islands		
Tobacco	115	2	53,547	464
Textiles	231	8	50,168	2,100
Repair shop and shipbuilding	476	116	46,449	78
Foodstuffs	1,002	605	43,068	27
Vegetable oil, margarine, etc.	824	254	21,850	20
Printing, bookbinding, etc. ..	251	59	15,842	51
Earthenware, glass	100	23	12,371	102
Gas and electricity	518	212	11,232	154
Clothing, shoes	24	1	7,624	30
Wood products	81	70	7,083	52
Chemicals	61	11	6,038	82
Beverages	177	163	5,005	21
Metal	34	12	3,710	81
Rubber articles	10	4	3,371	240
Tanning	23	2	1,583	63

Source: Peter H. W. SITSMA: *Industrial Development of the Netherlands Indies* (Bulletin No. 2 of the Netherlands and Netherlands Indies Council of the Institute of Pacific Relations, issued apparently in 1944), p. 41. The figures are those given in the source. For some industries, however, they do not seem complete.

Capital goods industries still played a relatively insignificant role in the modern industrial structure of the country. Secondly, as a part of the Government's economic policy, the development of factory industry during the period was, in the main, closely co-ordinated with the programme for the revival and modernisation of the traditional handicraft industry. For instance, the new large-scale textile industry, under Government direction, produced materials mainly complementing, rather than competing with, the handicraft textile industry, whose output of sarong was little affected by the rise of modern

textile mills. Similarly, in the cigarette making industry the mechanised cigarette factories concentrated on the manufacture of the European variety of cigarettes, and left the making of "strootjes" to the handicraft workshops.

The most important large-scale factory industry in Malaya is the tin smelting industry, which has been controlled by two British companies, one at Singapore and the other at Penang. Before the war the industry not only smelted the tin ore mined in Malaya, but also handled large quantities of ore imported from abroad, principally from Siam, Burma, Indo-China, Indonesia, and Japan. Malaya has thus come to be regarded as a tin smelting centre for the whole of South-east Asia. The output of metallic tin from the smelters amounted in 1936 to 84,616 long tons, or about half the world total; and in 1940 it reached the record figure of 130,930 long tons. It is significant that the dominant position of the Malayan tin industry in the world market "has been maintained by the imposition of prohibitive export duties on ore exports from Malaya except when destined to be smelted in the United Kingdom or Australia".¹ Pineapple canning is another modern processing industry which has been particularly developed in Malaya. To serve the needs of the rubber plantations and tin mines, a fairly large number of engineering works and foundries were established, particularly in the Straits Settlements. Other, smaller processing industries included rubber, tapioca, tobacco, and palm oil processing.

The chief factory industries in the Philippines are engaged in the processing of four agricultural products: sugar, coconuts, tobacco, and abaca (Manila hemp). The sugar processing industry consists of two separate branches, the sugar centrals and the sugar refineries. Before the war there were 46 sugar centrals, which undertook only the preliminary milling and grinding of sugar cane and had an output of about 1.5 million short tons a year. In the peak production year of 1934 the number of persons employed in the sugar centrals together with their dependants was estimated at about 150,000. Although the greater part of the raw sugar produced by the sugar centrals was shipped abroad for refining, the Philippines also had 3 principal sugar refineries, with a total fixed investment of more than 2

¹ Kate L. MITCHELL, *op. cit.*, p. 184.

million pesos and a total annual capacity of about 140,000 long tons. There were 18 coconut oil factories with a capital investment of 24 million pesos; the pre-war value of exports of coconut oil, desiccated coconut, and copra meal from the Philippines greatly exceeded that of plain copra exports. The tobacco industry, with a capital investment of 6 million pesos, employed about 20,000 workers in the 'thirties. While the bulk of abaca was exported in the form of fibre, there were 5 cordage factories before the war, employing about 2,900 workers and representing a capital investment of approximately 6 million pesos. The prosperity of all four of these industries depended before the war largely upon free access to the United States market. With the removal of preferential treatment by the United States consequent upon Philippine independence, many of these processing industries, as also Philippine agriculture, may have to go through a period of readjustment.

Among the modern industries producing primarily for home markets are those manufacturing cement, paints and varnishes, aerated waters, confectionery, shoes from imported leather, furniture, matches, and soap. Most of these industrial undertakings are very small.

EFFECTS OF INDUSTRIAL DEVELOPMENT ON FOREIGN TRADE

In the group of countries comprising Siam, Burma, Ceylon, Indo-China, Indonesia, and Malaya, industrial development before the Second World War was limited mainly to export industries, namely, mining and the processing of the principal agricultural and mineral products. This type of industrial development, coupled with the growth of plantation agriculture, led to a vast expansion in the volume and variety of exports from these countries. There was also a great expansion in their imports, consisting notably of: (a) machinery and transport equipment required for the development and maintenance of the export industries; (b) certain raw materials from other parts of Asia, to be processed for export, *e.g.*, tin ore imported into Malaya; (c) consumers' goods to meet the modern tastes of the local European or westernised population; (d) consumers' goods needed by the local population, especially cotton textiles. The increase in the imports of consumers' goods was

due partly to the substitution of machine-made foreign goods for home-produced handicraft goods and partly to the rise in aggregate demand resulting from the increased income from exports. Until recently the local factory industries were too small to meet the demand effectively.

Though the economic structure of all these countries is broadly similar, they differ widely in regard to the volume of their foreign trade. The average annual value per head of their imports and exports (commodity trade only) during the years 1936-1939 was as follows (expressed in U. S. dollars): Siam, \$3.55 for imports and \$5.10 for exports; Burma, \$5.60 and \$12.66; Indo-China, \$2.60 and \$4.05; Indonesia, \$4.00 and \$6.70; and Malaya, \$63.00 and \$75.55. These differences in the volume of foreign trade were due partly to differences in the level of income per head and partly to differences in the proportion of imports and exports to the national income. The above figures also show that all five countries had an export surplus on commodity account, which was particularly large in the case of Burma. This commodity export surplus served to finance heavy "invisible imports"; the returns on foreign investment consisted mainly of profits rather than of fixed interest charges. There was consequently a high degree of flexibility in the balance of payments of these countries, especially in time of depression. Another important fact is that before the war most of these countries had a favourable balance of trade with the United States, which, by making available a considerable supply of U. S. dollars, played a vital role in maintaining multilateralism in international trade in the pre-war period.

In China and India, on the other hand, the development of modern industry was not primarily oriented towards export markets; its main aim was to supply domestic needs. Exports of agricultural products from these two countries, however, increased markedly during the past century as a result of the development of modern sea transport and, more particularly in India, of railways. There were also certain modern industries in China and India which produced mainly for world markets. These included the mining of iron ore, tungsten, antimony, tin, and mercury in China and of manganese ore, mica, ilmenite, and monazite in India; most of the output of these mines was exported to various industrially advanced

countries. The outstanding examples in these two countries of modern manufacturing industries producing for world markets were the jute industry in India and silk reeling in China.¹ Both countries also exported increasing quantities of cotton yarn and piece-goods to neighbouring Asiatic countries. In addition, there were a number of factory industries processing agricultural products which depended on world markets, such as the tea industry in India and the manufacture of egg products in China. But the development of these modern mining and manufacturing industries had only a small effect on the export trade of China and India—probably smaller in China than in India—as compared with the expansion of trade in the group of countries considered above.

The effects of industrial development on the import trade of China and India were more complex than in most of the countries of South-east Asia. There was a similar increase in the imports of capital equipment and raw materials, but in other respects there were important differences. While in most of the other countries considered the products of their modern industrial establishments did not compete seriously with imported consumers' goods until recently, local factory industries in China and India were increasingly able to supply the home market, with the result that the imports of certain consumers' goods declined. The marked shrinkage in the imports of cotton textiles into these two countries during the inter-war period provides the most striking instance of this development.² In China, during the years 1926 to 1935, the value of cotton piece-goods imports declined from £26.6 million to £1.5 million. The proportion of cotton piece-goods to China's total net imports fell from 16.9 per cent. in 1912 to 2.3 per cent. in 1935, while that of cotton yarn fell from 13 per cent. to 0.2 per cent. During the same period the proportion of iron and steel imports to the total rose from 2.3 to 8.1 per cent., that of raw cotton imports from 1.3 to 4.5 per cent., and that of textile machinery imports from 0.1 to 1.5 per cent. These figures give some indication of the structural changes in China's import trade brought about by the growth of its modern manufacturing

¹ In estimating the net contribution of the Chinese modern silk-reeling industry to the expansion of China's export trade, allowance should be made for the reduction in exports of hand-reeled silk due to the growth of the machine-reeling industry.

² For particulars for India, see table VII above, p. 65.

industry. During recent decades similar changes have also taken place in the import trade of India.

There was, however, a marked difference between China and India with respect to the balance of commodity trade. While India maintained a favourable, though varying, balance of commodity trade during most of the inter-war period, China had at all times a vast import surplus, which was, however, partly offset by remittances from Chinese residents abroad.

THE ROLE OF FOREIGN CAPITAL

The predominance of foreign or outside capital, most of it in the form of direct investment, has been a characteristic feature of modern manufacturing industry in Asiatic countries. The majority of the modern industrial establishments in these countries have not only been financed by such capital but also owned, managed, and operated by outsiders. This direct investment, however, has formed only a part, and often by no means the major part, of total outside investment. A very considerable amount of the capital from abroad was invested in the development of internal transport, in plantations and agriculture, and in banking and trading firms. In some of these countries, mining enterprises absorbed a much larger proportion of the total outside investment than manufacturing enterprises.

Though capital from abroad has played a major part in the industrial development of all the Asiatic countries under survey, the proportion of such capital to the total investment in modern industry has varied in different countries. There have also been variations in the extent to which the different lending countries have invested capital in the various Asiatic countries.

The total investment from abroad in China was estimated in 1931 to have reached the large sum of U. S.\$ 3,242 million, of which nearly 80 per cent. was direct business investment. Another estimate placed the investments of the principal creditor countries in China, excluding Manchuria, at the beginning of 1935 at U.S.\$1,000 million for the United Kingdom, U.S.\$500 million for Japan, and U.S.\$200 million for the United States. Before the war over half of China's coal industry, most of the iron mines, two thirds of the inland shipping, and

almost all the railways were financed by foreign capital. Of the total of about 5 million spindles in the cotton textile industry in the middle 'thirties, 43 per cent. were in Japanese-owned mills, 4 per cent. in British-owned mills, and 53 per cent. in Chinese-owned mills; and of a total of about 60,000 looms, Japanese-owned mills accounted for 50 per cent., British-owned mills for 7 per cent., and Chinese-owned mills for 43 per cent. Since the end of the war, the Chinese Government has taken over all the mills formerly owned by the Japanese. Among other industries in which foreign enterprise was important before the war were the cigarette industry, the soap industry, and electric power and other public utility undertakings. It has been estimated that 2.9 times as much capital was invested in the foreign-owned modern manufacturing industries as in industries under Chinese ownership. Most of the undertakings financed mainly with Chinese capital were in the smaller industries, such as foodstuffs, matches, building materials, and other light industries. The predominance of direct foreign investment in China led to the concentration of modern industries in a few treaty ports, principally Shanghai, where the foreign firms enjoyed extra-territorial rights.

Outside investment in India consists mostly of British capital, virtually the only financial resources that were available in the early stages of industrial development. In 1938-39 the total outside capital invested in Indian provinces, excluding the sterling debts of the Government of India, amounted to about £741 million, and the non-British foreign investment at the time has been estimated at £150 to £200 million. Most of India's mining enterprises, tea and coffee plantations, banking and trading firms, and various types of transport were financed by the British. Among the modern manufacturing industries likewise financed by the British were the jute, soap, engineering, cigarette, and chemical industries. The principal firms in many of these industries are subsidiaries of large United Kingdom companies. The match industry in India is financed mainly by Swedish capital. However, domestic capital has assumed an increasingly important role in Indian industrial development in recent years. The cotton textile industry, for instance, which advanced rapidly during the inter-war period, is now 80 per cent. Indian-owned. The iron and steel industry, in which the well-known Tata Iron and Steel

Company is engaged, has been developed mainly by Indian capital and enterprise. It is reported that quite recently a large number of industrial shares have changed hands and that Indian interests have assumed considerable importance.

Foreign capital has likewise dominated the leading modern industries in Siam. Before the war about 83 per cent. of the teak industry was controlled by foreigners, chiefly British and partly Danish and French. The modern tin mines were owned by British and Australian investors. The rice milling, saw-milling and rubber industries, on the other hand, were financed and operated largely by Chinese. Siamese capital played in the past an insignificant role in the development of manufacturing industries; it was not until the end of the 'thirties that the Government began to take the lead in establishing new industries with domestic capital, and, as already noted, many of the new industrial undertakings are financed and managed by the Government.

Outside capital investment in Burma before the war was almost exclusively (over 90 per cent.) British or British-controlled. Of £47 million of out-standing direct investment from abroad in 1940, about 34 per cent. was employed in the extraction of oil, 32 per cent. in other mining, 12 per cent. in banking, trade and manufacturing, and only 2.5 per cent. in plantation agriculture. One special feature of British investment in Burma has been the control of numerous lines of industrial activity by a small group of large British companies; one such company has interests in the teak industry, rubber plantations, rice milling, oil refining, textile manufacturing, and various other industrial and business undertakings.

As previously mentioned¹, 85 per cent. of the company investments in Ceylon in 1939 were reported to consist of outside capital.

French capital had a virtual monopoly over all mining undertakings in Indo-China before the war, since only persons of French nationality were permitted to run or operate mining concessions. As regards manufacturing, the distillation of alcohol was a Government monopoly, and French capital also dominated the textile and sugar refining industries, as well as rubber production. Rice milling was controlled chiefly by

¹ See above, p. 50.

Chinese capital. Domestic capital investment was limited to small-scale light industries, such as the manufacture of soap and matches.

On the other hand, domestic capital played a considerable part in Indonesia, before the war. There was also a somewhat wider diffusion of outside investments among different nationalities, though Netherlands capital continued to dominate the principal industrial activities. A recent estimate of capital investments gives the following figures for the shares of different countries (in million guilders): Netherlands, 2,500 (52 per cent.); Indonesian, 900 (19 per cent.); British 450 (9.3 per cent.); United States, 380 (7.8 per cent.); Chinese, 320 (6.6 per cent.); French and Belgian, 160 (3.3 per cent.); and German, Italian, and Japanese, 90 (2 per cent.).² The proportion of outside capital invested in modern manufacturing industries was quite small. About half the total private foreign investment was in plantation agriculture (rubber, tea, coffee, tobacco, etc.), a fourth in the petroleum industry, and the remainder in other industries and in commerce.

Estimates of the proportion of outside capital to the total investment in Malaya should be accepted with caution because, although European and American investments can be assessed with a fair degree of accuracy, the assessment of capital from elsewhere presents greater difficulty. The amount of domestic capital, largely in the hands of the Chinese, is difficult to determine, and no records have hitherto been maintained in respect of small industrial undertakings, which are known, however, to provide a high proportion of local manufacturing production. According to one estimate, British capital forms more than 70 per cent. of the total business investment in Malaya. Next in importance, according to another estimate, is Chinese capital, which accounts for 30 per cent. of the total tin production and 16 per cent. of the total acreage of rubber plantations. Except for tin smelting, outside investment in modern manufacturing industry is of minor importance; in 1936 it represented only 9 per cent. of the total outstanding investment from abroad, compared with 52 per cent. in rubber companies, 13 per cent. in tin mines, and 26 per cent. consisting of public debt. Pineapple canning, foundries, and the

² *Financial Times* (London), 10 Oct. 1946.

manufacture of rubber goods are almost entirely supported by local Chinese capital.

Domestic capital has played a fairly active part in the development of modern industries in the Philippines. In the late 'thirties it controlled approximately 45 per cent. of the sugar centrals, 40 per cent. of the cordage industry, 25 per cent. of the embroidery industry, and over 20 per cent. of the sawmills. The gold and chromium mining industry, the public utility undertakings, the coconut oil industry, the embroidery industry, and the cordage industry were developed chiefly by United States capital; Spanish capital played an important part in the development of the tobacco industry; the capital invested in rice milling was entirely Chinese. The 'thirties saw a marked expansion in Japanese capital investment in the Philippines, especially in offshore fishing, the textile industry, shoe manufacturing, and iron and manganese mines. One of the reasons why the share of United States capital in the total business investment in the Philippines was smaller than that of the capital from the metropolitan country in other non-metropolitan countries of South-east Asia is that the economy of the Philippines was not merely complementary to that of the United States, but was highly competitive in certain fields, such as the growing of sugar and tobacco

FACTORS AFFECTING THE DEVELOPMENT OF MODERN INDUSTRY

Among the principal factors which have favoured or retarded the growth of modern industry in Asia, the most important so far is doubtless the general lack of enterprise. Men of enterprise, ready and able to respond to market opportunities, have been scarce in all Asiatic countries. Not only capital, but also the initiative in developing modern industry, has come mainly from abroad. It is only in recent years that in China, India, Siam, and the Philippines, local entrepreneurs and the public authorities have played an active part. In most other Asiatic countries, no such local initiative of substantial importance has yet been taken.

Most of the investment from abroad has, moreover, been direct investment: the new industries have been established, as well as equipped, by foreign investors, and these investors, through

their representatives, have also operated and managed them, and have introduced modern productive techniques and methods of organisation—a contribution perhaps of even greater importance, in the long run, than the actual provision of capital.

European and, later, North American investors at first promoted the development of large-scale plantation agriculture and modern mining in the countries of South-east Asia, because the raw materials so produced were in great demand for the expanding manufacturing industries of their own countries, and the development of modern transport had made long-distance trade in them easy and profitable. The next step was the development of certain types of modern industry: the processing of agricultural and mineral products for export. Partly with a view to providing the necessary transport facilities to bring these products to world markets, and partly also in order to facilitate administration and in general to promote the development of the areas under their control, Governments of Asiatic countries introduced irrigation and electricity schemes on a considerable scale. Here again, the initiative came mainly from abroad.

Modern manufacturing industries producing for Asiatic home markets were established at a later stage. Their development was favoured by a variety of factors, principally the abundance of cheap unskilled and semi-skilled Asiatic labour. When the general level of wages in the older industries rose with the over-all rise in average productivity, labour costs in some industries in western countries tended to be higher than they were in the same types of industries in Asiatic countries using similar or more modern methods. In such cases it was clearly more profitable to export capital and management to Asia than to export finished goods. There was thus a strong incentive to establish in Asiatic countries such industries as cotton textiles, soap, and cigarettes, which required little skilled labour and produced for a large market. In other cases, economies on transport costs favoured local production, notably where the raw materials used, such as rubber, were available locally and were more bulky than the finished product.

The development of modern manufacturing industries in Asiatic countries was stimulated by the reduction in imports during the First World War. As the greater efficiency of western productive techniques and methods of industrial orga-

nisation, compared with the traditional methods, became more widely recognised by the peoples of these countries, many Asiatic investors and entrepreneurs took advantage of the opportunity provided by the war to make up by local production for the decline in imports. The difficulty of importing capital equipment during the war was, of course, a limiting factor; but a number of new, locally sponsored industries were set up.

With the end of the war came competition from abroad, and to check this competition, China and India raised their tariffs on imported goods. This resulted in a rise in the price and a reduction in the quantity of certain classes of imports, which again provided a stimulus to domestic industry. But higher tariffs had also the effect of inducing investors from abroad to establish their undertakings in Asiatic countries, and since foreign firms were as a rule more experienced and more efficiently organised than local firms, and their financial position was in many cases stronger, they proved to be formidable competitors.

In recent years, however, there has been a considerable increase in the opportunities for local and foreign firms alike, as a result of the adoption of measures especially designed to promote industrial development. One of the main reasons for introducing these measures, at any rate in certain areas, was to counteract excessive specialisation in production for export markets subject to violent price fluctuations. During the world depression of the 'thirties the wages of mine and plantation workers in countries of South-east Asia were cut and many of the workers were thrown out of employment, and such countries favoured industrial development with a view to providing suitable occupation to these workers. It was also becoming increasingly clear that industrial development was essential if the rapidly growing pressure of population on resources was to be relieved. This consideration was found particularly urgent in Java. Finally, it should be pointed out that during the two years between the outbreak of the Second World War and the attack on Pearl Harbour, considerations of defence led Governments to establish certain basic industries, such as the metallurgical and chemical industries, in various Asiatic territories, notably in Indonesia.

By and large, however, industrial development in Asiatic countries of the Far Eastern region has been slower and less

varied than might have been expected from the resources available. One reason for this is indisputably the absence of an adequately developed money market and the persistence of the traditional conceptions of property and contract. The lack of enterprise is, however, the most important factor. Unflagging and vigorous initiative—the introduction of new methods of production, new products, and new industries—is an essential condition of rapid industrial progress. In the past this basic condition failed to be adequately fulfilled in most of the Asiatic countries.

In the non-metropolitan territories of South-east Asia, the local populations are composed mainly of small peasants and of wage earners employed by metropolitan or foreign firms. They have been far too poor to afford a proper education or to save up capital. Local enterprise has consequently been negligible, and industrial progress in those territories has depended almost entirely upon initiative from abroad. But such initiative has been neither constant nor plentiful, and it has been confined mainly to the production of raw materials. Proposals for the encouragement by official action of industrial development in a wider field could hardly find favour with manufacturing and exporting groups in the metropolitan countries.

Apart from the traditional attitude of the East towards the acquisition material wealth, there are other social and economic factors which tended to stifle industrial initiative. Business enterprise requires an intimate knowledge of western productive techniques and methods of organisation, based on the principles of modern science. The assimilation and adaptation of such knowledge by Asiatic countries is inevitably a slow process. The old business community, steeped in the traditional ways of doing things, could not be expected to break new ground in business ventures. Such industrial leadership as is to be found in these countries is confined to the very small number of persons who have acquired an adequate appreciation of western technology and culture. It is no accident that in China, for example, most industrialists came from the coastal provinces, in particular, Kiangsu, Chekiang, and Kwangtung, which first felt the economic and cultural impact of the western world.

Business enterprise needs financial backing. There are usually two domestic sources from which such activity can be financed: one is credit creation and the other the current and

accumulated savings of the community. These two financial sources have for various reasons been inadequate in the past in China and India. Until recently the method of credit creation, which served the needs of industrial development so well in western countries, was seldom practised in Asia owing to the lack of deposit banking and an imperfect understanding of the productive function of credit. As regards money savings, although the level of national income in these countries is extremely low, the annual savings of the wealthy classes of the community are nevertheless large because of the very unequal distribution of income; but the bulk of such savings have not flowed into modern industries.

The unwillingness of savers in these countries in the past to invest in modern industries may be partly explained by the fact that such investments not only appeared to involve high risks, but also yielded low profits compared with such traditional avenues of capital investment as usury, investment in real property, and wholesale trade in agricultural products. The risks were regarded as exceptionally high for two reasons: first, modern factory industry as an economic institution was something entirely new and unfamiliar; secondly, investments in modern industries were typically long-term capital investments and, as such, involved greater uncertainty and risk than the short and medium-term investments to which most of those savers had become accustomed. This was especially true during periods of political instability.

The majority of savers in these countries preferred liquidity and security of capital to profitability accompanied by risk-taking. However, even for those savers who sought high returns from their investments, modern industries appeared unattractive because their profits were low, or at least not as high as the profits in some of the more lucrative lines of traditional capital investment. The basic reason for this lay in the low efficiency and high production costs of most of the locally owned modern industrial undertakings, attributable to such factors as insufficiency of capital resources, inefficient labour, and inexperienced managements. In the face of keen competition from abroad and from local foreign firms, a number of the locally owned modern enterprises were doomed from the outset, and those which survived realised only moderate profits. As a result of such experiences, investors in these countries

were generally disinclined to invest their savings in modern industries. On the other hand, the returns from many of the traditional avenues of capital investment were exceedingly high. To the extent that prospects of profit determined the choice of investments, such businesses as pawnshops were likely to prove more attractive than modern industrial undertakings, especially to the small investor.

Some of the deterrents to the growth of local enterprise in the early stages of industrial development might have been overcome had measures been taken to facilitate the teaching of western science and technology, to minimise the risks of new ventures, to provide necessary financial assistance to newly established, locally owned modern undertakings, to accelerate the training of industrial workers, to promote and supervise industrial efficiency, and to reform the tax structure. Further encouragement could have been given, although at some cost, by higher tariffs. Until quite recently, however, the Governments of the countries considered here did not undertake any comprehensive and co-ordinated programme of action to foster local enterprise. Nor did they undertake managerial activities on any considerable scale on their own initiative to make up for the deficiency in private enterprise.

CHAPTER V

ECONOMIC EFFECTS OF THE WAR

The war has had far-reaching effects on economic conditions in the Asiatic countries of the Far Eastern region. The living standards of the peoples of these countries, which even before the war were at a bare subsistence level, were brought still lower. The period of enemy occupation and the large-scale destruction from military operations in several of the countries had particularly disastrous effects: millions of people were displaced and rendered destitute, farms were laid waste, factories and mines were either destroyed or forced by the shortage of labour and raw materials to suspend or reduce operations; the whole network of transport was damaged and disrupted. Large areas of forest were cleared for timber and for food production; this accelerated soil erosion, and the destruction caused by subsequent floods has been considerably greater than it would otherwise have been. The level of production during the war fell to a minimum. Civilian consumption was drastically reduced as a result of the heavy demands of the military and the virtually complete cessation of normal imports. Price inflation, a result of large war expenditures and the scarcity of goods and raw materials, has attained serious proportions. The immediate task facing these countries is, therefore, to provide relief to the population and to restore more normal conditions.

In India, however, production and distribution were carried on during the war with comparatively little disruption. Nevertheless, extensive economic changes took place. Aided by large military demands and the fall in imports, new heavy industries were established and light industries expanded. Exports increased in response to the increased foreign demand for war materials and essential consumers' goods. On the other hand, civilian consumption was curtailed as a result of the reduction

in imports and the diversion of resources to production for export and for military needs. At the end of the war India faced the immediate problem of maintaining a high and stable level of employment and production during the period of reconversion and the long-range problem of readjusting the wartime industrial structure to peacetime needs.

CHINA

Losses of Capital Equipment

War damage in China was most extensive in the field of transport. At least half the power-driven coastal and river fleet, totalling some 450,000 tons, was lost. Out of the pre-war total of approximately 8,000 miles of railway lines (excluding Manchuria), at least 2,000 miles were substantially damaged. About half the total number of locomotives and more than a quarter of the railway wagons were destroyed or rendered unfit for use. The destruction of road transport was equally severe. By the end of 1945, some 70 per cent. of the road mileage in the areas which had been under enemy occupation, excluding Manchuria, was in need of repair, about 80 per cent. of the bridges were destroyed, and about 70 per cent. of the pre-war number of trucks had been lost.

Comprehensive estimates of the loss of industrial capacity are not available. It is, however, unlikely that modern industrial establishments suffered as severely as the transport system from war damage. Some industrial plants were safely removed to the interior of the country at the beginning of the war. The liberation of the coastal provinces, where most of the modern industries were located before the war, did not entail large-scale military operations, and the Japanese had no time to demolish the industrial equipment in those provinces before the final surrender. Previously, however, a number of factories in the former occupied areas had been dismantled and the machinery had been removed for use in Japan or scrapped and converted into war material. For instance, out of 5.6 million cotton spindles (1937 figure), about 2 million were lost. The capacity of the silk industry was greatly reduced by the extensive destruction of mulberry trees. The industries in the interior sustained heavy losses from air raids.

Modern Chinese industry before the war depended on imports for the supply of spare parts and new equipment, which came to a stop during the eight years of war. Many industries broke down for lack of the necessary repairs and renewals, a factor which has also seriously hampered the revival of industrial activity since the end of the war.

War damage to agricultural capital in the numerous small farming units scattered throughout the country is even more difficult to assess. Considering the large areas laid waste by the enemy, the destruction of agricultural capital is likely to have been extensive. Besides the destruction of many farm-houses and the removal of agricultural implements, carts, etc., by the Japanese, there was a heavy reduction in livestock. It has been estimated that in 1945 the number of horses, mules, donkeys, water buffalo, cattle, goats and sheep in China proper was at least 20 per cent. below the pre-war number, and that the number of pigs had fallen by about 30 per cent. and of poultry by about 40 per cent. The loss of draught animals was a particularly serious handicap to the restoration of agricultural production. The productivity of the land has deteriorated for lack of manuring. The war has also caused extensive damage to irrigation works, which are vital to agriculture in many parts of China. The breaking of the Yellow River dykes during the war had the disastrous effect of flooding about 13,000 square miles of food-producing land and putting a complete stop to cultivation in this area.

Wartime Industrial Production

There were virtually no modern industries in the interior of China before the war, but they developed rapidly with the inflow of population from the occupied area and the increasing requirements of the defence forces. The process started with the retreat from the coastal areas in 1937, when, with Government assistance, 639 factories together with 116,000 tons of equipment and 12,164 skilled workers were transferred to the interior. From then on, industrial expansion proceeded rapidly in the face of great difficulties, including that of obtaining equipment and materials from abroad. The expansion was particularly striking in the provinces of Szechwan, Hunan, Kwangsi, Shensi, Yunnan, and Kweichow. By 1942, accord-

ing to the Ministry of Economic Affairs, Free China had 3,758 factories, employing 241,662 workers and using 143,916 hp. of power.

This process of industrial development was characterised by two notable features. In contrast to the pre-war tendency, the main emphasis of China's wartime industrial policy was on the rapid development of basic producers' goods industries with a view to meeting the increasing need for military supplies. In 1942, these industries accounted for more than half the paid-up capital of all registered factories in the interior. From 1940 to 1943, the production of petrol in Free China increased from 73,453 gallons to approximately 4 million gallons; of kerosene, from 32,335 gallons to 2.1 million gallons; of iron, from 55,182 metric tons to 84,337 metric tons; of steel, from 1,364 metric tons to 10,430 metric tons; of alcohol, from 1.1 million gallons to 10.7 million gallons. There was also a marked expansion in the production of machine tools, industrial machinery, and electrical appliances. The capacity of the electric power industry in Free China was raised from 17,000 kw. before the war to 48,637 kw. in 1944. However, coal production in 1944 amounted only to 5.5 million metric tons, as compared with a total for the whole of China of 34.3 metric tons in 1936.

As regards consumers' goods, the capacity of the modern cotton textile industry and the flour-milling industry expanded only to a limited extent during the war. In 1944, there were only 305,000 cotton spindles in Free China, including 33,000 in newly established cotton mills. At the end of 1943, there were 42 flour mills, producing approximately 92 million kg. of wheat flour, only about 5 million kg. more than in 1940. On the other hand, the cigarette industry, the lamp bulb manufacturing industry, the paper industry, and the printing ink industry all registered considerable increases in production.

The other striking feature of wartime industrial development in Free China was the prominent part played by public enterprise. In 1942, Government-owned firms accounted for 69 per cent. of the total paid-up capital of all factories in the interior. The urgency of war needs led the Government to take the initiative in establishing basic producers' goods industries as quickly as circumstances permitted. This was most notable in the case of the metallurgical, engineering, mining, chemical,

and electrical appliances industries. Government capital also played an important role in several consumers' goods industries, such as textiles, printing, and school supplies. Most of the Government-owned mines and factories were under the management and control of the National Resources Commission of the Ministry of Economic Affairs. Generally speaking, these firms operated on a much larger scale and had a larger capital than the private firms established during the war.

In spite of the rapid expansion of industry during the early years of the war, the volume of industrial output in the interior was still very small and could meet no more than a fraction of the large military and civilian demand for goods. With the outbreak of war in the Pacific, the virtual stoppage of imports of equipment and materials from abroad made it impossible for Free China to continue its industrial expansion. For lack of imported petroleum and trucks, road transport in the interior broke down, causing a general contraction of industrial activity in various provinces. Meanwhile production costs rose steadily with the rise in wage rates and interest rates. Inflation made it increasingly difficult for industries to obtain sufficient working capital to finance their current production. During the latter part of the war, therefore, Free China was faced with an industrial crisis, which was partly met by the reorganisation of all industrial production under the direction of the War Production Board.

Japanese policy in occupied China was to curtail the production of goods for civilian consumption and to promote the expansion of heavy industries for the prosecution of the war. Consequently, most of the light industries in the coastal industrial centres that remained intact had either to suspend operations or were forced by the lack of fuel, raw materials, and skilled labour to cut down their production substantially during the war. In North China, on the other hand, basic producers' goods industries were rapidly established under the Japanese-sponsored development programme. It has been estimated that in 1943 there were no less than 12,000 industrial establishments, employing over 900,000 workers, in the five northern provinces (excluding Manchuria).¹ The capacity of the electric power

¹ See the article by CHENG Pa-Bing on the immediate problem of industries in North China, in the *Economics Weekly*, published (in Chinese) in Shanghai, Vol. III, No. 1, 4 July 1946, p. 13.

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industry was increased to 465,000 kw. The output of iron and steel, mining equipment, industrial and agricultural machinery, and industrial chemicals, which was negligible before the war, expanded considerably during the period of Japanese occupation.

Wartime Agricultural Production

Agricultural production in China declined appreciably during the war. As table XVI shows, the estimated total production of cereals for the 22 provinces of China proper in 1945 was 15 per cent. below the pre-war average. It should, however, be noted that in occupied China the decline in agricultural output was much greater than the above figure suggests, owing to the disorganisation of agricultural labour, the destruction of farming equipment, the loss of draught animals, the lack of seeds and fertilisers, and the extensive flood caused by the breaking of the Yellow River dykes. The amount of food available for civilian consumption was further reduced by Japanese exactions for military purposes. With regard to industrial crops in occupied China, attention may be drawn to the drastic reduction in the area under cotton which followed the commandeering of raw cotton at extremely low prices by the Japanese.

TABLE XVI. PRODUCTION OF CEREAL CROPS IN 22 PROVINCES OF CHINA
(,000 metric tons)

Crop	Average 1931-1935	1945		1946 (forecast)	
		Amount	Percentage of pre-war average	Amount	Percentage of pre-war average
Wheat	22,285	18,402	83	22,110	99
Rice	49,308	42,924	87	42,794	87 ¹
Barley	8,419	6,770	80	8,267	98
Corn	6,410	5,413	84	6,053	94
Millet	6,657	5,659	85	6,299	95
Proso-millet ..	568	482	85	536	95
Kaoliang	6,788	5,758	85	6,447	95
Total	100,435	85,408	85	92,506	92

Source: UNITED NATIONS RELIEF AND REHABILITATION ADMINISTRATION: *Economic Recovery in the Countries Assisted by UNRRA* (Washington, D. C., Sept. 1946), p. 163.

¹A later forecast raised the figure to 95 per cent. of the 1931-35 average.

Despite military conscription and the shift of agricultural labour to industries and construction works in Free China, agricultural production was not only maintained during the war but, in many provinces, actually showed a slight increase. According to one estimate, the annual production of major foods in 15 provinces in 1943 was about 6 per cent. above the 1931-1937 average, and since then production is reported to have risen further. This achievement may be attributed to the sustained efforts made by the Government during the war to improve seed, extend acreage, and develop irrigation works in the interior.

Economic Recovery

China is faced with the enormous task of providing relief on a large scale to the population and rehabilitating the country's economic life, particularly in the areas recovered from the Japanese. There is, first of all, the urgent need to relieve the suffering of the population, hard hit by the war and its consequences. Large quantities of food, clothing, and medical supplies have to be made available to them at once, while means must also be found to settle, and provide housing for, the large numbers of displaced persons. Even more important is the task of restoring the country's shattered productive machinery as quickly as possible: the transport system has to be repaired; fuel and electricity supplies have to be restored; raw materials to be replenished; the labour force to be reorganised; industrial equipment to be replaced and repairs carried out; farmhouses to be rebuilt; and seeds, fertilisers, draught animals, and farm tools to be distributed to the peasants in order to revive agricultural activity.

The magnitude of China's task of relief and economic rehabilitation is indicated by the estimates of its total requirements which the Government submitted to the United Nations Relief and Rehabilitation Administration (UNRRA). As indicated in table XVII, part of the resources, both financial and material, for the execution of this programme will be provided locally, but a considerably larger portion must be obtained from abroad, especially in the case of relief supplies and of materials for the rehabilitation of transport and industry. After eight years of destructive war, the country's export capa-

TABLE XVII. TOTAL REQUIREMENTS OF CHINA'S RELIEF AND REHABILITATION PROGRAMME

(,000's)

Item	Total requirements			Material requests from UNRRA	
	Chinese expenditure	Imported supplies	Imported tonnage	Imported supplies	Imported tonnage
	Ch. \$ ¹	U. S. \$	metric tons	U. S. \$	metric tons
Food	100,000 ²	316,840	3,271	153,881	1,254
Clothing	150,000 ²	979,305	1,098	154,919	145
Shelter	100,000 ²	25,000	1,050	5,000	50
Health	246,515	66,154 ³	74	66,154 ³	74
Transport	430,964	663,014	3,397	330,102	1,606
Agriculture ⁴	206,700	86,350	759	77,476	663
Industries	1,153,500	348,500	564	115,000	189
Flooded areas	139,570	6,500	12	4,500	9
Welfare services	160,817	32,531 ⁵	27	32,531 ⁵	27
Displaced persons	39,098	5,633	1	5,633	1
Total	2,727,164	2,529,827	10,253	945,196	4,018

Source: GOVERNMENT OF THE REPUBLIC OF CHINA: *Relief and Rehabilitation in China* (Washington, Sept. 1944), p. 8.

¹At pre-war value. ²Internal distribution costs of a part of the total programme to be carried through with the supplies requested of UNRRA. ³Including U. S. \$360,000 for foreign experts and U. S. \$1,200,000 for foreign fellowships. ⁴Requirements for rehabilitation of fisheries and rural industries not yet determined. ⁵Including U. S. \$275,000 for foreign fellowships for Chinese experts, but not including costs for foreign experts.

city has been greatly reduced and its foreign exchange reserves have been seriously depleted. To finance these vast import requirements during the transition, China must rely heavily on foreign assistance. It will be noted that, according to the original Chinese plan, UNRRA was asked to supply about 37 per cent. of the total import requirements, while the remaining 63 per cent. was to be met mainly by foreign loans and partly by current exports.

The most serious obstacle to the restoration of productive activity after the war has been the disorganisation of transport, due partly to the destruction of transport equipment and partly to continued military operations. The inadequacy of transport facilities prevented deliveries of coal and raw materials to the factories, impeded the movement of foodstuffs from

rural districts to scarcity areas, and led to the accumulation of imported relief supplies in Chinese ports.

Agricultural production in the 22 provinces of China was expected to increase considerably in 1946. Wheat production was to be restored to nearly the pre-war level, and rice production to about 95 per cent. of the pre-war level. Despite the increase in agricultural production, the food situation in 1946-47 appeared to be, for several reasons, still precarious. Even in normal times China is deficient in food supplies, particularly wheat, and must import large quantities of food from abroad. Although the over-all production figure shows a substantial increase, serious local food shortages may still develop because of the disruption of transport. Because of continued inflation and the difficulties of securing supplies of industrial goods, farmers tend to hoard their produce, thus creating an acute food shortage in the cities.

Industrial production in the areas recovered from the Japanese came to a standstill in the months immediately following the cessation of hostilities. Its subsequent recovery was delayed because the Government decided to take over enemy-owned factories, and considerable time was lost in reorganising them. The most serious bottleneck retarding the immediate resumption of industrial activity was the shortage of coal and raw materials, which was further aggravated by the disruption of transport. The industrial consumption of electricity in Shanghai, which had fallen to about 2 per cent. of the pre-war (November 1936) level, rose to 33 per cent. in March 1946 and to 55 per cent. in June 1946. The speed of recovery, however, varied markedly in different industries in Shanghai. By June 1946 the consumption of electricity had risen to about 50 per cent. of the 1936 level in the cotton textile and rubber manufacturing industries, 57 per cent. in the flour-milling industry, 65 per cent. in the woollen textile industry, 34 per cent. in the cigarette industry, 30 per cent. in the silk reeling industry, 3 per cent. in the saw-milling industry, and 26 per cent. in the oil pressing industry. On the other hand, the consumption of electricity in the paper industry, food canning industry, and textile industries other than cotton and wool showed a great increase above the pre-war level. In North China about one third of some 300

factories in the Peiping-Tientsin district taken over by the Government had resumed operations by the middle of 1946.

While industrial activity has been increasing slowly but steadily in areas recovered from the Japanese, it has declined heavily in the interior. Many of the factories were moved back to the coastal industrial centres, while some of the war industries closed down and others either suspended operations or reduced production drastically as a result of the termination of war contracts. Consequently, industrial unemployment in the interior has been growing since the end of the war.

Inflation

Inflation continues unabated in China and this is another serious obstacle to speedy economic recovery. In Shanghai, the index of workers' cost of living (1936 = 100) continued to rise rapidly, from 94,507 in December 1945 to 184,573 in February 1946 and to 681,259 in January 1947. Wages have risen, but there have been numerous industrial disputes and strikes, seriously affecting production. Furthermore, as a result of inflation there has been a growing shortage of working capital in industrial undertakings. One effect of excessive profits from commodity speculation has been to draw away the liquid funds on the money market. The rate of interest has risen to such an extent as to be an effective deterrent to industrial borrowing.

The inflationary spiral was caused by successive budget deficits and accelerated by the general desire to substitute goods for money as a protection against further depreciation of the currency:

The budget approved for 1946 shows expenditure of \$2,525 billion [2,525,000 million Chinese dollars] as against revenue of \$1,848 billion. Of this total revenue, \$500 billion is to come from the sale of the enemy property seized in China, and \$720 billion from taxation. As the resumption of tax collection is taking a considerable time, a very substantial proportion of expenditure is at the present time being financed by further note issue. On the expenditure side, military expenditure accounts for \$1,104 billion (43 per cent.) and reconstruction expenditure for \$77 billion (3 per cent.). In addition, a sum of \$432 billion is provided for expenditure in the field of relief and rehabilitation.¹

¹ *Economic Recovery in the Countries Assisted by UNRRA*, op. cit., pp 75.

An essential condition for currency stabilisation in China is obviously the reduction of military expenditure.

External Financial Position

The most striking feature of China's external financial position is the large deficit in the balance of payments on current account. The total exports in 1946 amounted to only a small fraction of the imports. In the seven months November 1945 to May 1946, the total value of exports through the port of Shanghai amounted to U.S. \$15.3 million as against total imports of U.S. \$195.9 million, of which UNRRA supplies accounted for U.S. \$80.3 million.¹ To help to finance this deficit, a limited amount of foreign credit was arranged, including a long-term loan from Canada of \$60 (Canadian) million, and several loans from the United States Export-Import Bank for the purchase of raw cotton and other rehabilitation supplies, which together amounted to U.S. \$66.7 million. With a view to stimulating exports and encouraging remittances from Chinese settlers abroad, the Government depreciated the official rate of exchange per U.S. dollar from the wartime rate of 20 Chinese dollars to 3,350 Chinese dollars in August 1946 and to 12,000 in February 1947. However, owing to the difficulties of inland transport and other bottlenecks in production, exports are not likely to expand to any considerable extent in the near future. The trade deficit for 1947 has been estimated by the Government at U.S. \$455-500 million²; this will no doubt involve a heavy drain on China's meagre foreign exchange reserves unless additional foreign credits are made available.

INDIA

India, unlike China, was not subjected to enemy occupation, nor did it suffer any extensive destruction. Nonetheless, the war brought about great changes in the national economy, some purely temporary and others more likely to last. The level

¹ Converted at the rate of 2,000 Chinese dollars to the U. S. dollar.

² The estimates do not include UNRRA imports, Chinese Government imports under the United States and Canadian credits and purchase agreements, reparations from Japan or requirements for economic development in excess of \$100 million.

and structure of national output, employment, and consumption were seriously affected as a result of the reduction in imports, and of the increase in exports to the Allied nations, the increase in war production for home defence, and the expansion of the armed forces. What is even more noteworthy is the present widespread demand in the country for planned economic development to raise the standard of living of the common man, a demand which is in great measure due to the wartime experience of organisation of production. This experience has filled the people with confidence that the process of economic development can be accelerated.¹

Industrial Development

The war provided a powerful stimulus to industrial development in India. The demand for war goods increased; an expansion in employment and an increase in consumer spending, combined with a reduction in imports, led to an increase in the demand for consumers' goods; increased investment activities caused an increase in the demand for capital goods; and exports of industrial goods increased to meet the growing needs of the Allied countries. In response to these increased demands, there was a substantial increase in employment and production in nearly all industries. Industrial expansion was, however, limited by a number of bottlenecks. The most serious difficulty was that of obtaining capital equipment and materials from abroad. The shortage of coal, caused partly by the small productive capacity of Indian coal mines and partly by the disruption of transport, was another obstacle to industrial expansion. There was also a shortage of skilled labour and technical personnel, both of which are indispensable for the development of basic industries.

Despite these and other bottlenecks, there was substantial industrial expansion in India during the war, as is indicated by the increase in industrial employment from 1939 to 1945, shown in table XVIII. It will be observed that employment

¹ For a description of reconstruction planning in India during the war, see INTERNATIONAL LABOUR OFFICE: *Wartime Labour Conditions and Reconstruction Planning in India*, Studies and Reports, N. S. No. 2 (Montreal, 1946). Most of the material contained in the following section is drawn from this report.

in Government-owned factories increased far more rapidly than that in private factories, and that, in the case of private establishments, the rate of increase was on the whole higher in producers' goods industries essential to the war effort than in consumers' goods industries such as the textile, food, drink and tobacco, and paper and printing industries. The vast military needs for consumers' goods were met largely by restricting the supplies for civilian consumption rather than by augmenting output.

TABLE XVIII. AVERAGE DAILY NUMBER OF WORKERS EMPLOYED IN INDIAN PROVINCES IN INDUSTRIAL ESTABLISHMENTS SUBJECT TO THE INDIAN FACTORIES ACT, 1939, 1944 AND 1945

(,000's)

Industry group	1939	1944	1945	
			Number	Percentage increase over 1939
<i>Central, provincial, and municipal Government establishments</i>				
Clothing	2.2	24.9	22.8	936
Dockyards	4.9	13.6	12.8	162
Engineering (general) ..	7.7	30.0	38.5	400
Railway workshops ..	55.8	121.7	116.5	108
Ordnance factories ..	30.7	158.3	185.6	504
Mints .. .	1.8	7.7	7.3	305
<i>Private establishments</i>				
<i>Perennial :</i>				
Textiles	817.0	993.0	1,011.0	24
Engineering	148.0	265.0	270.0	82
Minerals and metals ..	55.1	99.1	125.5	128
Food, drink and tobacco ..	97.0	132.0	152.0	57
Chemicals and dyes, etc. ..	55.9	88.9	99.7	78
Paper and printing ..	44.4	52.7	57.0	28
Wood, stone and glass ..	52.3	96.2	101.2	94
Gins and presses ..	26.0	15.1	16.0	-38
Skins and hides ..	12.9	34.6	36.3	181
<i>Seasonal :</i>				
Food, drink and tobacco ..	150.0	162.0	157.0	5
Gins and presses ..	137.0	128.0	113.0	-7

Source : *Indian Labour Gazette*, Vol. IV, No. 4, Oct. 1946, pp. 124-126.

At the outbreak of the war India was producing about 1,750,000 tons of pig iron and 750,000 tons of finished steel a year. The production of pig iron rose to 2 million tons in 1943, and the productive capacity for finished steel to 1,250,000 tons. The development of refractories, ferro-alloys, tinplate, bolts, steel castings, and other industries ancillary to and associated with the steel industry was a marked feature of the wartime industrial expansion. The rapid growth of non-ferrous industries, such as the aluminium, lead, zinc, and tin industries, during the war is especially noteworthy as none of them had existed on any substantial scale before. The manufacture of engineering equipment increased to unprecedented levels in most branches. Hardly a hundred machines a year were made in India before the war, but in 1943 the output, though confined to the simplest type of machine tools, was 4,500. Marked progress was also made in the electrical, mechanical, and structural engineering industry. In the early months of 1944 the output of the structural engineering industry was over 10,000 tons a month. Experiments were also made to increase the production of railway wagons by commencing the manufacture of rivets, axles, and wheels, which were formerly imported. The chemical industry, which was only of minor importance in India before the war, also expanded considerably. The production of sulphuric acid, the basic raw material for many heavy chemicals, rose from 40,000 tons to 93,000 tons a year. This increase led to a substantial advance in the production of nitric acid, copper sulphate, and bichromates. Notwithstanding this progress in many branches of the chemical industry, there was an acute shortage of chemicals during the war, particularly of caustic soda, chlorine, sodium bicarbonate, and bleaching powder. The production of chemical fertilisers rose from 25,000 tons in 1938-39 to 40,000 in 1942-43. In response to the heavy Government demand, the production of cement increased from approximately 1.5 million tons in 1939 to 2.1 million tons in 1943. The expansion of the industry is expected to continue after the war because the demands upon it, both for home consumption and for export, are likely to remain high.

Among consumers' goods industries, the clothing and leather industries expanded more rapidly than others. In both cases the primary stimulus was Government requirements for military purposes. The large-scale production of clothing was essentially

a wartime enterprise and clothing factories were for the most part established by the Government to manufacture ready-made garments for the defence services. Nearly 10 million garments were produced per month, as compared with about 75,000 in 1931. The leather industry increased its output nearly 20 times during the war. The production of army footwear in 1943 amounted to no less than 6.5 million pairs, as against the pre-war average annual production of 100,000 pairs. The woollen textile industry also expanded during the war. The annual factory production of woollen and worsted cloth rose from approximately 7.3 million lbs. before the war to 27 million lbs. during the war; and the woollen knitting industry produced about 5.1 million garments annually during the war as compared with 1.6 million before the war.

It should, however, be noted that there was no substantial increase in the production of cloth by the cotton mills during the war, despite the great increase in demand, both domestic and foreign, for textiles. The production of cotton piece-goods amounted to 4,269 million yards in 1938-39, and there was no marked variation in this figure until 1942-43; in 1943-44 it increased to 4,871 million yards—only about 14 per cent. above the 1938-39 level. A major factor limiting the mill production of cotton cloth was the difficulty of importing textile machinery. Other bottlenecks hampering the expansion of cotton textile production were shortages of coal and of skilled workers and inadequate supplies of mill stores and textile accessories. With a large proportion of the limited output diverted to war purposes and to export markets, the supply of mill-made cotton cloth available for civilian consumption was reduced from 4.7 million yards in 1938-39 to approximately 2.3 million yards in 1942-43, or by 51.6 per cent. There was, however, a substantial increase in the production of cotton cloth by the handloom industry. With a view to relieving the acute clothing shortage the Government of India issued the Cotton Cloth and Yarn (Control) Order in June 1943, providing for control of the prices, production, and sale of cotton cloth and yarn and for the prevention of cloth hoarding by manufacturers and dealers. It also established a Textile Control Board. The Government thus facilitated the production of large quantities of standard cloth at a uniform stabilised price, which was allocated on a population basis to various provinces and States.

Large supplies of cloth were thus made available for civilians. Nevertheless the total annual consumption per head declined from the pre-war figure of about 16 yards to 9 yards.

The soap manufacturing industry—an essential consumers' goods industry—declined during the war, mainly owing to the difficulty of obtaining a sufficient supply of caustic soda from abroad. The production of soap decreased from about 157,000 tons in 1938-39 to about 90,000 tons in 1943 or by no less than 42 per cent.

The jute industry was also adversely affected by the war. Owing to the shortage of shipping, exports of jute declined heavily and jute manufactures fell from 1,311,600 tons in 1938-39 to 975,000 tons in 1944-45, or by approximately 26 per cent.

This brief survey of wartime industrial development in India, though far from complete, shows that, as might be expected, most of the industries which expanded rapidly were associated with the war effort, and that not only was there no comparable expansion of consumers' goods industries, but there was a considerable reduction in the supplies of consumers' goods available for civilian consumption. This was undoubtedly one of the main reasons for the sharp rise in prices during the war.

Food Supply

Although India's capacity for agricultural production suffered no military destruction, the war nevertheless caused severe food shortages and precipitated the famine in Bengal in 1943, which resulted in the loss of a million and a half lives.

In normal years India produces about 50 to 53 million tons of grain, including rice, wheat and millets, and consumes about 54 to 55 million tons. The deficit is made up mainly by imports of rice from Burma. Small as this over-all deficit is, it is of crucial importance. The normal food consumption per head is extremely low and consequently the normal food imports, though small, are vital to the maintenance of a bare minimum of subsistence for the mass of the population. Agricultural production in India is subject to considerable variations. The dependence upon food imports is therefore much greater than is suggested by the import figure in normal years. Even in normal years there are always marked inter-regional differences

in food production, but as a rule local shortages are effectively relieved by the rapid transport of supplies from surplus to deficit areas.

During the war, not only was the total supply in India reduced as a result of the cessation of imports from Burma, but the internal distribution of food was severely disrupted by the diversion of transport facilities to the movement of military supplies. Acute food shortages developed in the deficit provinces, *e.g.*, Bengal, Madras, and Bombay. The province of Bengal was hardest hit, partly because of the removal or destruction, as a precautionary defence measure, of small river craft employed on the inland waterways in East Bengal, and partly because of the ravages caused by floods and cyclones.

There were other factors which tended to accentuate the wartime food shortages. A substantial proportion of the country's foodstuffs was acquired by the Government for the armed forces. The effective demand of civilians for food rose considerably, following the expansion in industrial employment and the increase in consumer spending. The lack of manufactured consumers' goods led farmers to consume and hoard more of their produce than usual, so that less was available to the cities. And with the rapid rise in agricultural prices, dealers in foodstuffs took to hoarding in expectation of further price rises.

In the middle of 1943 the Government of India put into force a broad programme to relieve the critical food situation. A system of price control on a provincial and regional basis was instituted. The machinery for procurement and supply was improved and systematic advance plans were prepared for the accumulation and distribution of stocks. Measures were taken to improve storage facilities. Food rationing was gradually extended, and by November 1944, 42 million persons in about 460 towns were on rations. The provincial and State Governments co-operated with the Central Government, and 3 million acres of new land was brought under cultivation. Some of the land under cotton and jute was diverted to food production. These measures together brought about a substantial improvement in the food situation in the later war years. In 1946, however, India again faced a severe food crisis owing to unfavourable weather conditions.

Wartime Price Movements

Attention has already been drawn above to the considerable shortages of civilian supplies in India during the war. On the other hand, the money incomes of the consuming public greatly increased, mainly owing to wartime Government expenditure, and the effective demand for goods and services therefore expanded. Measures for the immobilisation of consumers' excess purchasing power, for the rationing of essential consumers' goods, and for price control took a long time to become effective. The price level in India moved rapidly upwards during the early years of the war, as will be seen from table XIX.¹ The relative rates of increase of the prices of different commodities provide a fairly clear indication of the extent to which these commodities were in short supply. For instance, supplies of

TABLE XIX. INDEX NUMBERS OF WHOLESALE PRICES IN INDIA BY GROUPS OF COMMODITIES, 1939-40 TO 1945-46

(Base : Week ended 19 August 1939=100)

Commodity group	1939 -40 ¹	1940 -41	1941 -42	1942 -43	1943 -44	1944 -45	1945 -46
General index ..	125.6	114.8	137.0	171.0	236.5	244.2	245.0
Agricultural commodities ²	127.5	108.6	124.2	166.2	268.7	265.4	272.8
Raw materials ³ ..	118.8	121.5	146.9	165.9	185.0	206.0	210.1
Manufactured articles ⁴ ..	131.5	119.8	154.5	190.4	251.7	258.3	240.0
Sugar ..	121.0	100.0	102.0	127.0	146.0	158.0	167.0
Kerosene ..	109.0	122.0	138.0	185.0	186.0	176.0	169.0
Cotton manufactures ..	117.0	118.0	173.0	292.0	422.0	293.0	271.0

Source : RESERVE BANK OF INDIA : *Report on Currency and Finance for the year 1946-46* (Bombay, 1946), p. 120. Fiscal year ends 31 March.

¹For seven months ended March 1940. ²Rice, wheat, tea, groundnuts, coffee, sugar, tobacco, copra, cotton (raw), jute (raw), and linseed. ³Pig iron, coal, lac, wool (raw), hides and skins (raw), kerosene and petrol. ⁴Cotton manufactures, jute manufactures, cement, galvanised corrugated sheets, and leather.

¹For a detailed account of the effects of wartime inflation in India, see "Wartime Inflation in India and its Social Consequences", in *International Labour Review*, Vol. I, No. 6, Dec. 1944, pp. 736-750.

cotton manufactures and of foodstuffs for civilians were very scarce, and the prices of these commodities increased most rapidly. By March 1945 the general index of wholesale prices was about 144 per cent. above the pre-war level. The rate of price increase during the war was much higher in India than in Australia, New Zealand, Canada, the United States and the United Kingdom, but it was very much lower than in China and in most parts of Asia under enemy occupation, which have been characterised by runaway inflation during, and in the years immediately following, the war.

It will be noted that the rate of price increase in India, while rapid during the period from the outbreak of the war to 1943-44, slowed down considerably during the later war years. The average wholesale price index rose only by 3 per cent. in 1944-45 and remained fairly stable in 1945-46. This comparative stability of the price level was achieved mainly by the vigorous action taken by the Government to augment civilian supplies of food and cotton cloth, to absorb surplus consumer purchasing power, and, finally, to improve the machinery for the control and rationing of essential consumers' goods. During the first year and a half after the end of the war, however, prices rose still further, largely owing to the rise in the prices of agricultural commodities in short supply; the wholesale price index rose from 247 in December 1945 to 293 in March 1947.

War expenditure, which caused the expansion of money income and effective demand, was estimated at approximately 24,310 million rupees up to March 1945. Of this total, 13,335 million rupees, or a little more than half, was incurred by India on behalf of the United Kingdom Government. The total internal revenue during the same period amounted to about 10,708 million rupees, or slightly less than half the total war expenditure. A large part of the war expenditure was financed by the issue of currency by the Reserve Bank of India against sterling assets accumulated in London. Notes in circulation increased from approximately 1,790 million rupees in August 1939 to 8,940 million rupees in April 1944, and demand deposits from 1,360 million rupees to 5,650 million rupees. The rapid increase in money incomes, made possible by this expansion of active money supply, combined with the scarcity of goods and materials, brought about the inflationary price movements during the early years of the war.

Accumulation of Sterling Assets

The large war expenditure incurred by India on behalf of the United Kingdom and the increase in export merchandise surpluses both on private and on Government account led to a great increase in the sterling assets held by the Reserve Bank of India. At the end of March 1946 the total was 17,240 million rupees as against 640 million rupees at the end of August 1939. The annual figures concerning the acquisition and disposal of sterling are shown in table XX. Part of the sterling assets acquired during the period was utilised for the redemption of the sterling debts, as is evident from the far-

TABLE XX. ACQUISITION AND DISPOSAL OF STERLING ASSETS HELD BY THE RESERVE BANK OF INDIA, 1939-1946

(million rupees)

Sterling assets	Sept. 1939- March 1940	1940 -41	1941 -42	1942 -43	1943 -44	1944 -45	1945 -46	Sept. 1939- March 1946
<i>Available for disposal and disposed</i>								
Holdings at end of pre- vious period ..	640	1,420	1,440	2,840	5,110	9,450	13,630	640
Purchased by Bank ¹ ..	860	760	990	1,270	1,450	1,420	1,380	8,130
Payments by U. K. Gov- ernment	160	430	1,990	3,100	3,650	3,570	3,420	16,320
Other credits ² ..	—	40	20	30	90	120	150	450
Total	1,660	2,650	4,440	7,240	10,300	14,560	18,580	25,540
<i>Disposal</i>								
Utilised for repatriation schemes	220	890	1,100	1,600	160	140 ³	—	4,110
Commitments on Gov- ernment account ..	20	320	480	480	670	740	730	3,440
Sales to public ..	—	—	20	50	20	50	610	750
Holdings at end of period	1,420	1,440	2,840	5,110	9,450	13,630	17,240	17,240
Total	1,660	2,650	4,440	7,240	10,300	14,560	18,580	25,540

Source: RESERVE BANK OF INDIA, *op. cit.*, p. 41.

¹Represents deliveries under ready and/or forward contracts, including acquisitions of dollar balances and securities, U. S. Treasury payments, etc. ²Derived figure. ³Includes 225.2 million rupees, the amount paid on purchase of certain railways.

reaching changes in the composition of India's public debt: between 1939 and 1946 the sterling public debt fell from about 4,690 million rupees to 374 million rupees, and the rupee public debt rose from 7,100 million rupees to 19,275 million rupees.

In so far as the effect of the war on the external financial position is concerned, the case of India therefore offers a striking contrast to that of most other Asiatic countries, where foreign exchange reserves were greatly depleted as a consequence of the war. This enormous volume of sterling assets provides a wide "international margin" for post-war economic reconstruction and development, and India's need for foreign loans for this purpose is thus greatly reduced. It is however necessary to point out that the usefulness of these sterling assets to India will depend upon the speed with which they can be utilised for the purchase of goods and services in the sterling area as well as in other countries, particularly in the United States; this, in turn, will depend mainly upon the balance-of-payments position of the United Kingdom during the transition period. At the time of writing, negotiations on the settlement of the question of India's accumulated sterling assets are still in progress between the Governments concerned.

The Problem of Transition

Since the end of the war India has been faced with the problems of transition: the prevention of frictional unemployment, the speedy reconversion of war industries, and the stabilisation of the nation's aggregate expenditure. With a view to counteracting unemployment, the Central Government in October 1945 requested all provincial Governments to prepare urgent interim public works plans for immediate action, consisting of schemes selected from their 5-year plans, preference being given to those schemes which would provide a high proportion of employment relative to costs.

Defence expenditure was reduced from 3,913 million rupees in 1945-46 to 2,381 million rupees in 1946-47, and it is estimated at 1,887 million rupees in the budget for 1947-48; in addition, the budget estimate of defence expenditure recoverable from the United Kingdom in 1946-47 decreased to 416 million rupees, as against 3,470 million rupees in the preceding year. Up to the present, the reduction of defence expenditure does not appear to have had any noticeable deflationary effect.

Prices have continued to rise under the stimulus of a considerable pent-up civilian demand for both capital goods and consumers' goods despite continuing shortages. The expansion of peacetime production has been hampered "by the inevitable delay in obtaining capital goods in a world clamouring for them after the widespread devastation of war, by labour unrest and strikes, by persistent difficulties in the rehabilitation of the transport system".¹ In 1946, India suffered serious food shortages owing to the failure of the rains in the south and parts of the north. Early in the year, the country was faced with a deficit of 7 million tons, or approximately 10 per cent. of its total food requirements. The threat of famine was staved off by imports of food grains from abroad and by more efficient procurement and distribution of food supplies by the Government.

The stimulus from pent-up demand cannot, however, be expected to last long. When it subsides, the maintenance of aggregate expenditure and economic stability will depend heavily upon the offsetting forces provided by private and public expenditure devoted to long-term economic reconstruction and development. To stimulate private investment, the Finance Minister in his budget speech for 1946-47 proposed the elimination of the excess profits tax as from April 1946, the exemption from income tax of depreciation and obsolescence costs and expenditure on research, and a reduction in the custom duties on imported raw materials, machinery and plant. In the field of public investment, five-year plans of reconstruction and development have recently been drawn up by the Central, provincial and State Governments. The total expenditure provided for in the five-year plans prepared by the provincial Governments, excluding that of the North-West Frontier Province, is estimated at 7,670 million rupees, of which 4,660 million rupees will be devoted to public works, 1,040 million to education, 900 million to medical and public health expenditure, 850 million to agriculture, and 220 million to industry. A leading item in the Central Government's five-year plan is the development of railways, the estimated expenditure on which is 3,190 million rupees.

¹ Statement made on 28 Feb. 1947 by the Finance Minister in his budget speech for 1947-48 (*Indian Information*, Washington, D.C., 15 March 1947, p. 236).

SIAM

In Siam, where Japanese interference was not extensive, economic stability was better maintained throughout the war, and military destruction was on the whole less, than in most other South-eastern Asiatic countries. About one third of the pre-war stock of locomotives and motor vehicles was destroyed. The damage to industrial plants other than buildings, including the demolition of the plant of the Siam Cement Company and one of the power plants in Bangkok, is estimated at some 79 million baht or nearly 8 million U. S. dollars. Siam, being a rice-surplus country, did not face any great food shortage during the war. According to an appraisal of the world food situation made by the United Nations Food and Agriculture Organisation, Siam's calorie consumption in 1946-47 was over 95 per cent. of the pre-war level. Figures for rice production during and after the war are not available. Rice exports declined during the Japanese occupation to an estimated 535,000-650,000 tons in 1943, compared with 1,892,240 tons in 1939-40. For the first half of 1947, the Rice Food Board of the International Emergency Food Council has fixed the rice export quota from Siam at 375,000 tons. In 1946, rubber production was reported to be only 33 per cent. of capacity, which remains virtually intact.

BURMA

Losses of physical capital were particularly severe in Burma, and the productive and distributive system was thoroughly disorganised as a result of the war. In Rangoon alone, 11,432 buildings were wholly or partially destroyed by bombing and 956 by fire, and 472 suffered such damage as to render them unusable. Before the war, there were 1,027 factories, employing 89,383 workers, registered under the Factories Act, but at the end of 1946, over a year since the end of the war, there were still only 355 factories, employing 31,521 workers, at work. The heaviest losses were suffered by the rice milling industry ; at the end of 1946 there were only 272 mills employing 11,439 workers, as against 673 employing 41,626 workers before the war. The damage done to transport was enormous. The loss of nearly all power-driven vessels and of 90 per cent. of other

craft was particularly serious, as inland navigation is the principal means of transport in Burma. Six sevenths of the pre-war locomotives and nearly all the passenger coaches were lost, and only a small number of goods wagons remained usable. Most of the oil refineries and installations were destroyed by the British in 1942 before their withdrawal. Up to the beginning of 1947, petroleum production was almost completely suspended, and it is estimated that another two years will be required to restore the oilfields. The cement and sugar industries and all electric power plants with a capacity of more than 1,000 kw. were also completely destroyed.

Nearly half the area under rice—6 million out of 12½ million acres—went out of cultivation during the war, and it is believed that restoration of the normal acreage will require about three or four years. Before the war, Burma produced about 7.75 million tons of rice a year, of which about 3.25 million tons were exported. By 1946 production had fallen to 2.75 million tons and exports to 0.5 million tons, and for the first half of 1947 the exportable surplus is expected to be not more than 800,000 tons. Extensive damage was done to the important teak industry, and it is estimated that a period of five years is needed to restore the industry to normal.

The effects of the war were accentuated by the use of inflated Japanese currency, which became entirely valueless after the surrender of the Japanese. Shortages of consumers' goods, capital equipment, and raw materials of all kinds resulted in a sharp rise in prices, and the cost of living for the working population at the end of 1945 was about 7 times higher than before the war. Since March 1946, the cost-of-living index (base 1941 = 100) has ranged from 350 to 400. To meet this rise, cost-of-living allowances have been paid, which in the case of the lowest paid workers amount to 200-300 per cent. of the pre-war wages and which have added to the heavy strain upon the economy of the country.

CEYLON

Though the war caused very little loss of physical capital in Ceylon, it had considerable repercussions on the economic conditions in the island. For the first time there was an acute shortage of manpower in virtually all sectors of the

economy as a result of the diversion of working population into the services. The heavy curtailment of imports caused serious shortages of essential consumers' goods, especially rice and clothing. As noted before, the local production of these two basic commodities supplied only a small portion of the local needs. From 1940 to 1944, the imports of rice fell from 592,789 tons to 111,931 tons, and of cloth from 83.9 million yards to 40.9 million yards. In 1946 the imports of rice rose to 253,695 tons, but those of cloth declined to 33.6 million yards. The consumption of cotton clothing per head of population was only 5.98 yards in 1946, as against 15.11 yards in 1940. In the face of the wide disparity between the demand for and supply of consumers' goods, the price level rose steadily during the war. The index of the cost of living for urban workers in December 1946 was nearly twice as high as in January 1941. It is of interest to note that despite the numerous difficulties, the production of rubber and tea expanded considerably in the war years. Rice production was encouraged, but without much success owing to climatic conditions. Besides the increased acquisition and investment of capital by local enterprises during the war, there has been a steady increase in the volume of savings, from 5 million rupees in 1940 to 122.7 million rupees in 1945.

INDO-CHINA

The total war damage in Indo-China, as provisionally estimated by the French delegation to the Economic Commission to Asia and the Far East of the United Nations Economic and Social Council, amounts to 2,802 million piastres at pre-war value. About half the junks and locomotives, 90 per cent. of the heavy vehicles, and 63 per cent. of the private cars, were lost. Fifty-six per cent. of the asphalt roads and 51 per cent. of the metal roads need to be rebuilt or repaired. War damage to transport and communications has been estimated at 803 million piastres. The greater part of the damage can be repaired locally, and good progress is reported to have been made in the restoration of means of communication since the war ended.

The restoration of industrial and mineral production has been impeded by the lack of equipment, the disorganisation

of transport, and local disturbances. The monthly output of the Tonkin anthracite mines was 30,000 tons in the middle of 1946, as compared with 218,000 tons before the war. The production of cement and iron ore at the beginning of 1947 is reported to have been only a fraction of the pre-war volume. Agricultural production also declined sharply during the war and is recovering only slowly. The rice surplus available for export in 1947 is estimated at 250,000-500,000 tons as against 1,692,000 tons in 1939. The production of rubber in 1947 is expected to be 15,000-20,000 tons, as compared with exports of 65,000 tons in 1939. It is, however, noteworthy that the output of tea and coffee expanded considerably during the Japanese occupation.

It may be added that so far as the over-all rice situation of the rice-surplus area of South-east Asia, consisting of Siam, Burma, and Indo-China is concerned, the acreage in these three countries is estimated to have been reduced to about two thirds of the pre-war acreage. Their estimated exportable rice surplus in 1947 amounts to no more than 1.9 million tons, a decrease of 68 per cent. compared with the pre-war average of 6 million tons. For the world as a whole, the total exportable surplus of rice is estimated at 2.7 million tons for the year ending June 1947, as against an average of 7.8 million tons during the period 1936-1940. This steep decline in the rice-export capacity of these three countries has made it difficult to improve the food shortages in other parts of Asia. The requests for the allocation of rice made by countries of the Far East (China, India, the Philippines, Ceylon, Indonesia, Malaya, Korea) for 1946-47 total 6.1 million tons.

INDONESIA

The "scorched earth" policy in Indonesia entailed severe destruction of industries and transport facilities. Besides, enormous losses were caused by military operations and by the removal of plants and equipment for scrapping and the ruthless exploitation of forests by the Japanese. About 50 per cent. of the pre-war shipping, 10 per cent. of the railways, 36 per cent. of the locomotives, and 17 per cent. of the wagons and passenger cars were destroyed. By the end of the war, only half the industrial plants could be operated, but in fact only

10 per cent. were in operation. Oil wells and refineries and tin mine installations were largely destroyed before the Japanese occupation. In August 1946, oil production in Java and Sumatra was still completely suspended, though partial restoration was taking place at Balikpapan and Tarakan. It is estimated that tin production will not be restored to the pre-war level before 1948.

War damage to agriculture was equally serious. The decrease of food production during the Japanese occupation varied from 10 to 70 per cent. according to crop. As to export crops, sugar production for 1947 is estimated at only 25,000 tons compared with 1.5 million tons in 1941, and rubber output has reached only a small fraction of the pre-war level. Considerable areas of perennial crops were shifted to food production during the war. The damage to plantations (owned by non-Indonesians) by uprooting of the plants and trees is estimated as follows: rubber, 70,000 hectares so lost out of 616,000 hectares; tea, 41,000 out of 138,000 hectares; coffee, 22,000 out of 72,000 hectares; and oil palm, 16,000 out of 106,000 hectares. The area of commercial crops cultivated by Indonesians has shown an even greater reduction, estimated at about a third of the tea acreage, half of the coffee acreage, a fourth of the coconut acreage, 99 per cent. of the white pepper plantations, and 75 per cent. of the black pepper plantations.

MALAYA

Heavy losses were inflicted in Malaya by the scorched earth policy of the British forces, by looting and removal by the Japanese, and by Allied bombing. The Japanese removed to Siam 254 miles of rails, 45 bridges, one third of the pre-war stock of locomotives, and one half the pre-war rolling stock. Sixty per cent. of the central railway workshops were destroyed by Allied bombing. The capacity of the tin mining industry was also heavily reduced. According to a report of the Inspection Committee of the Malayan Chamber of Mines, of the 126 dredges in Malaya, 41 might be able to resume operations by August 1946; 46 more by June 1947; 17 more by June 1948; and the remaining 22 have already been dismantled.

During 1946, the average monthly production of tin ore was only 700 tons, as against 7,125 tons in 1940. The annual

output is expected to reach 38,000 tons in 1947 and 65,000 tons in 1948. The productive capacity of the rubber industry, on the other hand, suffered very little as a result of the war, and the small percentage of rubber cut out, estimated at about 2 per cent., has been more than balanced by the "flush yields" obtained as a result of the enforced rest of the trees not tapped during the war. Though the decrease in productive capacity was small, the actual rubber output in 1946 was only 53 per cent. of capacity. The exports of rubber from Malaya in 1946 totalled 368,000 tons, as compared with an estimated 575,000 tons in the record year of 1941.

THE PHILIPPINES

The Philippines suffered heavy war losses, which, according to a preliminary estimate made by the Government, total more than U.S.\$1,600 million in terms of original cost in pre-war values. Manila and other large cities were extensively damaged. The entire inter-island shipping fleet was lost. By 1 September 1946, about one third of the pre-war total of 1,141 kilometres of railways were out of operation, and there was an acute shortage of rolling stock. The manufacturing and mining industries also sustained severe destruction. It is reported that "none of the country's sugar mills escaped some damage, all the major coconut-oil mills were destroyed; and many lumber mills were burned or looted of equipment, those having the largest output being entirely destroyed".¹ At the beginning of 1947, the coconut oil production was only about one tenth of pre-war production. Sugar production decreased from an average of 1 million tons before the war to 13,000 tons during the 1945-46 season. The country even had to import sugar from abroad to meet local needs. Gold output was also drastically reduced, resulting in a substantial loss of foreign exchange. The low ebb of industrial activity is indicated by the fact that the monthly consumption of electricity at the beginning of 1947 was only one tenth of the 1941 average.

The production of rice during the crop year 1945-46 was 70 per cent. of the normal amount, and that of maize 55 per

¹ "Philippine Economy in Liberation Year", in *Foreign Commerce Weekly*, 27 Apr. 1946, p. 6.

cent. The tobacco crop was only 25 per cent., and the production of abaca was less than one third, of the pre-war average. Only in the case of copra was there a rapid recovery of production and export; the total production for 1946 is established at 625,000 long tons, only about 10 per cent. below the 1936-1940 average. The livestock industry was one of the hardest hit. The present population of cattle is only 28.7 per cent. of the pre-war figure, of carabaos 58.7 per cent., of horses 38.7 per cent., and of swine 33.1 per cent.

To expedite economic recovery, the Government has set up a Rehabilitation Finance Corporation with a capital of U.S. \$150 million for the purpose of making reconstruction and development loans at reasonable interest rates. Another notable measure for economic rehabilitation is the Philippine Rehabilitation Act of 1946, passed by the United States Congress. The scheme is financed by the United States. Under this Act, "private damage claims, which will be reimbursed to the extent of U.S. \$400 million, are being settled, and a four-year programme, with a contemplated outlay of U.S. \$130.9 million, has been launched for the rehabilitation of public property; moreover, United States property valued at U.S. \$100 million has been turned over to the Philippine Government".

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As shown in the above brief survey, the process of economic recovery in South-east Asia has been difficult and slow during the first two years after the end of the war. One principal bottleneck common to all these countries has been the disruption of the distributive system owing to lack of transport equipment. In countries such as Indonesia and Malaya where inter-island communication is vital to the functioning of the economy, the loss of the shipping fleet and the destruction of port and harbour facilities were largely responsible for the delayed resumption of production and trade. Another factor is the scarcity of labour, which has retarded especially the restoration of plantation agriculture and mining industries. In most of these countries, the war has caused a great loss of manpower. Moreover, most of the pre-war labour force engaged in plantations and mines has been dispersed, and it will take a considerable time to rebuild it. The scarcity of labour has been

further aggravated by the reduction in the efficiency of workers through undernourishment and inadequate medical treatment, and also by the lack of incentive to work for money wages caused by the acute shortages of essential consumers' goods. In the rubber industry, for instance, where the destruction of productive capacity is comparatively small, the scarcity of labour has been one of the major obstacles to rapid recovery.

Shortages of industrial and mining equipment and spare parts are another important factor impeding the reconstruction of the countries of South-east Asia. As these countries are only in the initial stages of industrial development, they are almost entirely dependent upon imports for the supply of equipment needed for the repair and reinstallation of their devastated mines, factories, and public utilities. The rebuilding of houses and industrial structures will also require substantial imports of building materials such as timber and cement. Similarly, the restoration of agricultural production will depend, in considerable measure, upon the supply of fertilisers and farming implements from abroad. The imports of such rehabilitation supplies into these countries are as yet far short of the amounts required to bring their economies back to a normal working order.

In some parts of South-east Asia, the progress of post-war economic reconstruction has, furthermore, been handicapped by social and political unrest.

The necessary conditions for speedy economic recovery in these countries thus include internal political stability and an abundant flow of rehabilitation supplies from abroad. To restore the health, morale, and working efficiency of the population, there is an immediate need for large-scale imports of essential consumers' goods, particularly clothing and textiles, medical supplies and services. In some of these countries, such as Malaya, the crucial shortage is food, especially rice, and it can be relieved partly by improving the distribution of rice between the surplus and deficit countries within the region, but mainly by speeding up the recovery of rice production in the surplus countries and by increasing the imports of wheat and other food products from the rest of the world. As these countries rely heavily upon their export trade to obtain most of the manufactured goods they require, the restoration of their export industries is of vital importance to the economic

well-being of the region, next perhaps only to the restoration of the transport industries. Equipment and materials necessary for the restoration of these two groups of industries, therefore, deserve special emphasis in the import programme for post-war economic reconstruction. It should, however, be pointed out that, even assuming a rapid recovery of export trade, the total import requirements of these countries during the early stages of post-war reconstruction are likely to be much greater than can be paid for by the proceeds of their current exports. Their ability to obtain what they need will therefore depend on the extent to which financial assistance can be obtained from abroad in the form of loans or other arrangements.

SOME LESS TANGIBLE CONSEQUENCES OF THE WAR

The war wrought havoc upon the economies of most Asiatic countries. Any assessment of these effects, however, will be wholly inadequate unless full account is taken of the damage done to human resources. With sufficient imports of rehabilitation supplies from abroad and unity of purpose and action at home, the losses of physical capital can be quickly repaired and productive activity speedily restored. But it will take much longer to erase the effects of the war on the population. In China, in particular, the war caused great loss of life. The distortion of the age distribution of the population, due to the loss of men of the most productive age, will not be made good for a long time and consequently the average productivity of the population is likely to be impaired. Even more serious is the effect of wartime under-nutrition and privation on the health of young children. This is bound to affect the future labour supply. Furthermore, the war and the inflation have had a detrimental effect on the morale of the people. A particularly severe blow has been dealt to the newly emerging class of intellectual and professional workers who have been the natural leaders of the movement for modernisation. Consequences such as these, though less tangible than the destruction of factories, are likely to prove at once more serious and more lasting.

Most of the Asiatic countries are now facing the urgent task of restoring their war-shattered economies to normal working order. This task of economic rehabilitation, however, is only

a prelude to the more arduous task of industrialisation and economic development which lies ahead. Some of the problems involved in such development are discussed in Part II of this Report.

Part· II

PROBLEMS OF RAISING PRODUCTIVITY AND INCOME

CHAPTER VI

POVERTY AND THE PROBLEM OF POPULATION

INTRODUCTION

The first part of this Report has described briefly the significant facts of the economies of Asiatic countries in the Far Eastern region. The findings of these chapters can be summed up in one sentence: all these countries, whatever their individual characteristics and differences, suffer from extreme poverty.

They are predominantly agricultural countries. The central cause of their rural poverty lies in the very small size of the farm operated by the average rural family, and in the existing trend for it to become even smaller for reasons which have been stated. The small scale of the average agricultural enterprise makes it virtually impossible for the cultivator to raise his income from the land to any considerable extent, no matter how diligent and resourceful he may be. Two consequences follow: one is the dependence of most farmers upon supplementary occupations to make up for the deficiencies in agricultural income; the other is the heavy rural debts incurred for consumption purposes. As a result of default in the repayment of such debts, a large number of peasants lose their land to moneylenders and become landless agricultural labourers.

The minute size of the farm is itself a cause of the extremely low productivity of agricultural labour in Asiatic countries. It precludes the possibility of large-scale mechanisation of farming operations, which is, moreover, suited only to comparatively flat land. And since the size of the farm is too small to provide any surplus income for saving, the majority of peasants do not possess the financial resources necessary for the improvement of agricultural productivity even within the framework of labour-intensive methods of cultivation.

Industrial output constitutes only a small proportion of the total production of Asiatic countries, and the consumption per head of industrial goods is exceedingly low. A major portion of industrial output is still produced by handicraft industries scattered in numerous households and small workshops, both rural and urban, throughout the country. These industries are characterised by the smallness of the productive unit, the labour-intensive methods of production, the meagreness of capital investment, the low productivity of labour, and the low rate of wages and earnings. Many of these handicraft industries are, however, in the process of readaptation or decline under the impact of competition from machine-made goods, whether imported or produced at home.

Modern industries, or industries using power-driven machinery and large-scale methods of production, represent as yet only a small proportion of total industrial employment and output in Asiatic countries, although their development at least in some areas has been accelerated by the stimulus of the war. In China and India, modern industries⁴ are more fully developed in certain sectors of consumers' goods industries, particularly the textile industry, than elsewhere in the Asiatic countries of the Far Eastern region. In South-east Asia mining industries are generally of greater importance than manufacturing industries; the latter have until recently been confined mainly to industries associated with the processing of agricultural and mineral products for export markets. In the past, the development of modern industries in almost all the Asiatic countries has been brought about largely by foreign investment.

It is now necessary to examine what policies should be adopted to improve the economic condition of these countries. The ultimate aims and objectives of social policy can be decided only by the individuals who compose the society concerned. However, such decisions can best be taken in the light of full knowledge of the possible alternatives and of the probable consequences of adopting a particular course of action. An understanding of why some countries are rich and others poor is necessary in the first place. Further, the cost entailed by the execution of a programme designed to enrich a country must be clearly understood. Industrialisation will involve extensive changes in the present social structure of Asiatic countries. It is for these countries to decide whether and to what extent they

wish to embark on a policy of industrial development involving such changes.

An understanding of the problem of wealth and poverty is essential. The more specific measures suggested later in this Report for the economic development of Asiatic countries are based largely on the analysis of this problem. What are the factors determining the wealth of a country? Quite generally, its standard of living depends on its productivity. This again depends on the extent of its material resources, its capital equipment, the number, skill and other qualities of its people, their social attitudes and conception of values, and the existing organisation and technique of production. The standard of living of a people can be raised by the improvement of any of these factors.

The main obstacle to the success of a programme aimed at increasing the standard of living in Asiatic countries is, however, the possibility of so great an increase in population accompanying the increase in production as largely to prevent any improvement in average standards of living. It is true that, in economically developed countries, the population expanded rapidly at the same time as there were substantial increases in living standards. This was possible, however, for two reasons, neither of which would appear to be operative in Asiatic countries. In the first place, the economically developed countries had, before the industrial revolution, relatively low densities of population and there were, in addition, large undeveloped areas to which their peoples could emigrate. Secondly, in these countries economic institutions and social attitudes were rapidly evolved which ensured an adequate response to the opportunities created by the industrial revolution.

In western Europe, the agricultural and industrial revolution, by reducing death rates, led at first to a great increase in population, which could be supported by the rapid increase in production both in Europe and in the newly developed countries overseas, and which was, indeed, essential to increased specialisation and mass production. Subsequently, other forces arising out of the industrial revolution, such as urbanisation and the emancipation of women, came into operation which checked the rate of reproduction and prevented the fruits of industrialisation from being eaten up by unrestrained population growth. In the Asiatic countries of the Far Eastern region,

on the other hand, the initial growth of population which is to be expected as an inevitable consequence of improved living conditions is not needed to provide the labour and the markets for industrial output, as there are already ample numbers for this purpose. Further, in these countries the factors which elsewhere have tended to check population growth seem likely to be either inoperative or long-delayed, unless the existing pattern of society undergoes extensive and rapid changes.

The population problem is thus at the core of the problem of poverty in Asia. The ultimate success of the measures suggested in this part of the Report depends on the rate of population increase.

INCOME AND THE SIZE OF POPULATION

Why are some countries poor and others rich? What are the factors that determine the level of income? These are questions which cannot be answered completely within a brief compass. At the outset it is important to avoid a number of obvious, but nevertheless widespread fallacies. A particular country is often regarded as rich because it has abundant raw materials, especially iron and coal, or another country as poor because it lacks these resources. It is frequently said that countries which lack iron and coal can hardly expect either to be industrialised to any great extent or, in general, to become wealthy. In fact, discussions of the subject abound in statements that a lack of certain natural resources, particularly of iron and coal, will effectively prevent any substantial raising of national income.

Yet the facts show that this is not true. The relation between a country's natural resources and its social welfare and national income is considerably more complex. There are countries, such as Switzerland, which possess no raw materials to speak of, certainly little or no iron or coal, and which are nevertheless highly industrialised and wealthy. There are other countries—more numerous—which possess great natural resources, but whose population is for the most part extremely poor. Bolivia and Malaya are examples of this group. The availability or lack of raw materials within the national borders, although important, is only one determinant of the level of national income.

Neither can a complete explanation of the problem of poverty or wealth be found in the size of the population in any area.

The Asiatic countries of the Far Eastern region are said to be overpopulated. But overpopulation is a relative concept. Neither population density nor the land-labour ratio constitutes an appropriate criterion of overpopulation. There are densely populated countries such as the Netherlands which are wealthier than other less densely populated countries. An increase in population is not in itself undesirable. Many countries, faced with the possibility of a declining population in the near future, view the prospect with alarm. From the economic point of view, the optimum population for any country will be that which, given existing resources and the techniques available for their use, permits average standards of living to be maximised. Standards of living do not depend only on the resources of a country and its population; they depend also on the methods of production used by the population and on the proportions in which resources are allocated to different types of production. A country cannot, therefore, be said to be overpopulated in the sense that only if it had fewer people could the average output and income of each be higher, unless the methods of production used by the population and the allocation of its resources are the most economical possible.

Thus it cannot be said that Asia or any other part of the world is overpopulated without reference to the methods of production in use. In these methods lies the true reason why some countries have become relatively rich while others have remained poor. In the richer countries there has been a revolution in methods of production which has hardly any parallel in the poor countries. In agriculture as well as in secondary industry, the wealthier countries have developed and applied increasingly effective techniques of production. In particular, they have adopted methods involving the use of steadily increasing amounts of capital. This agricultural and industrial revolution has permitted them to support a greatly expanded population at a substantially higher standard of living.

It is this revolution in *all* methods of production rather than the development of secondary industries in particular that has made some countries rich. The first claim on production will always be for food to keep people alive. The development of agricultural knowledge and the adoption of methods of agricultural production involving the use of large amounts of capital are essential if any considerable body of workers is to be re-

leased for secondary and tertiary production. In turn the use of highly efficient and capital-intensive methods of production in secondary and tertiary industries permits these workers also to turn out the high volume of output which makes their peoples wealthy. Accompanying these developments, and vital to their success, has been a great increase both in the degree of specialisation and in the reliance on trade and exchange, alike between individual producers within national borders and between different countries.

The outstanding aspect of the problem of poverty in Asia is that a high proportion of the working force is engaged in agriculture and that its productivity is extremely low. Seventy to 80 per cent. of the population depends on agriculture, the average size of farms is not above 5 acres, and these farms, moreover, are usually split into several strips. A substantial reduction of the population engaged in agriculture is needed to relieve the pressure on the land and to provide the conditions necessary for an increase in the productivity and income of agricultural workers.

The improvement of agricultural productivity, which is dependent on changes in methods of production and on an increase in capital equipment, is discussed in the next chapter. Here it is only necessary to point out that this improvement is essential to economic progress. As long as production was carried on to supply minimum needs rather than to make a profit or in general to get a money income, as long as these needs were determined by status rather than by individual choice, and as long as people preferred freedom from the discipline which industrial organisation of necessity imposes on the worker, the methods pursued from time immemorial might be considered adequate. In agriculture these methods appear to have had one major virtue; they have in general maintained the fertility of the soil, despite intensive cultivation through many centuries.¹ But the small size of farms, their division into many

¹ Cf. Sir Albert Howard: *An Agricultural Testament* (London, Oxford University Press, 1940):

The agricultural practices of the Orient have passed the supreme test—they are almost as permanent as those of the primeval forest, of the prairie or of the ocean. The smallholdings of China, for example, are still maintaining a steady output and there is no loss of fertility after 40 centuries of management (pp. 9-10).

Sir Albert Howard attributes the maintenance of soil fertility to the practice of returning to the soil all organic waste matter.

parcels, the wasteful use of labour, and the poor strains of plants and animals have limited the level of farm output.

Now, however, Asiatic society is beginning to change. Modern methods of production are being introduced, though as yet only on a very limited scale; new commodities and services are being demanded to supplement the content of traditional living standards; economic relationships based on contract are gradually taking the place of customary relationships based on status. All these are characteristics of an industrial society and are indeed essential to industrial methods of production.

INDUSTRIAL DEVELOPMENT AND CAPITAL FORMATION

If a substantial number of workers are to be removed from agriculture, other occupations must be developed to employ them. These occupations should be of high productivity in order that the living standards of the persons leaving agriculture may be raised and in order that they may be able to produce goods and services with which to buy food from agricultural producers at home and abroad. The removal of these workers from agricultural production will, along with other improvements, permit the productivity of the remaining agriculturists to be increased, and enable them to buy the output of industrial producers with the surplus.

Two problems arise immediately. The first is the practicability of moving substantial numbers of agriculturists into industrial production. Will they have the necessary occupational skills and general education? In the economically advanced countries, agricultural workers normally have some measure of general education and are familiar with the operation of agricultural machinery. This gives them a basic understanding on which can be built, fairly quickly, a grasp of the techniques needed at least for semi-skilled industrial processes. Industrialisation in Asiatic countries, however, is hampered by a shortage of the kind of labour required for modern industry. The capacities required differ greatly from those commonly found among workers in agriculture and household industries in these countries. The industrial worker has to be literate; often he has to be able to read blueprints; he has to understand the need for industrial discipline. The countries in question are all short of workers with these qualifications. The shortage

varies from country to country, and from trade to trade, but it exists throughout the region. There is a shortage of managers, of capitalists willing to become entrepreneurs, of technicians and machinists. There is a shortage of all the more skilled types of labour needed in industry. This last shortage is of crucial importance. Resources can be imported, capital equipment can be imported or created at home. Skilled labour, however, apart from the few experts who may be persuaded to come from abroad, can be developed only by training. Unless domestic labour develops interest and energy in acquiring the necessary skills, this training may take a very long time. Writing of China, Mr. Kuo-Heng Shih states that:

One of the difficulties of China's industrial development clearly manifested in the interior is the lack of sufficient trained industrial workers. We do not like to over-emphasise this aspect, but as compared with other difficulties such as lack of capital, communications, and supply of raw materials, it seems that this may become a bottleneck. Supply of industrial workers cannot be dependent on foreign aid, and adequate supply cannot be made available within a short time. How to build up a labour basis for our industrial development is thus a particularly pertinent problem in planning a scheme of reconstruction.¹

The second great problem is that of capital formation. The improvement of productivity in agriculture and the development of new industries will depend largely on the rate at which capital equipment can be accumulated. It is sometimes possible, particularly in agriculture, to effect an improvement in methods of production without waiting for additional capital to become available. Thus land can be consolidated into single holdings instead of being held in scattered strips; seed strains can be improved; animal breeding can be made more selective; wastage of labour and of time can be reduced. Further improvements in agricultural techniques, however, and the introduction of modern techniques in industry will require considerable amounts of capital. The Asiatic countries considered here are seriously short of capital resources; and this lack of capital is at once the consequence and in large part the explanation of their poverty. Capital formation requires saving, and saving requires an income which is sufficiently high to permit a surplus over and above the necessary expenditures for consumption.

¹ Kuo-Heng SHIH: *China Enters the Machine Age* (Cambridge, Mass., Harvard University Press, 1944), p. xiii.

There can be little saving if income barely exceeds the subsistence level. Thus the low level of income itself makes any raising of the standard of living extremely difficult.

To put the same thing in physical rather than monetary terms, the formation of capital requires a change-over in the uses to which factors of production are put. In the Asiatic countries of the Far Eastern region, by far the greater part of the available resources for production is employed to produce a bare minimum of consumers' goods. It is difficult to spare any of these resources for the production of capital goods: railways, factories, machines, and so forth. The fact that labour, capital, and land seem barely sufficient to sustain life makes it difficult to take even the first steps to improve the lot of the mass of the people.

The situation should not, however, be regarded as hopeless. In the first place, if capital cannot be formed easily within the Asiatic countries, some at least can be imported from countries which not only have well-developed capital markets but also the skill and the capacity to produce for the needs of borrowing countries as well as for their own. Numerous arguments have been advanced against foreign borrowing; some of the more serious arguments for and against such borrowing will be discussed later in this Report.

However, the needs of the Asiatic countries for capital are so great that, even if full advantage is taken of every opportunity to borrow abroad, the great bulk of capital will have to be accumulated at home.¹ It is hardly conceivable that a country of the size and potentiality of China or India could be developed solely with capital borrowed from abroad to a level comparable with the present state of industrial development in the United States or the United Kingdom. This is a point whose importance cannot be overemphasised.² Not only is it desirable that capital should be formed within the country to be developed: such domestic formation of capital is absolutely essential if the standard of life of the bulk of the population is to be raised substantially within a reasonable period of time.

It is necessary, therefore, to enquire closely into the possibility of domestic formation of capital in Asiatic countries. This really comes down to the problem of whether workers of appro-

¹ On this point, see below, Chapters VII and VIII.

² On foreign loans, see Chapter VIII.

priate skills and other resources of production can be made available to build railways, roads, factories and machines, or to produce goods for export which can be exchanged for machinery produced overseas. Ignoring for the moment the problem of special skills which has been discussed above, it is clear, in the first place, that, if there is a substantial quantity of any of the resources for production which is not fully utilised—especially labour—the formation of capital can be proceeded with, without diminishing the supply of other goods. If, however, there are not sufficient unemployed resources, then domestic capital formation can be undertaken only by withdrawing resources from other uses. If these resources are drawn from modernised agricultural and secondary industries, or from efficient communication services, capital formation can take place only at the expense of a corresponding reduction of other types of output. However, if they are drawn instead from sectors which make only a small contribution to total output, the consequent reduction of output will also be small. If at the same time the industries and services from which such resources are withdrawn adopt more modern methods and gradually acquire for their use some of the capital that is being formed, they will probably be able so to increase the productivity of their labour as not only to compensate for the resources they have lost but also to increase their output despite the reduction of their labour force.

The large number of persons employed in performing personal and domestic service is an obvious source of labour supply for use in capital formation. In India, for instance, although only about 23 per cent. of the working population is employed in service industries¹, as against not far short of 50 per cent. in Australia and the United States, nevertheless 10 per cent. of the working population is engaged in personal service, compared with less than 5 per cent. in the two countries mentioned. The large number of persons so engaged reflects at least in part the current pattern of consumer preferences in Asiatic countries, and it is difficult to estimate how many of them could be shifted to other work without appreciably affecting the output of services for which a real demand exists. It seems likely,

¹ Included in this term are transport and communications, commerce, finance, armed forces, Government service, etc.

however, that a fairly substantial number could be spared without much loss in output; and if consumers' preferences could be shifted so that they would prefer more goods or more assets and less personal services, a large number of workers could presumably be released for other production, and particularly for capital formation.

Another important source of manpower is of course agriculture, which at present absorbs by far the greater part of the labour force in Asia. Since, however, it can at best produce no more than a minimum subsistence for the Asiatic peoples, it would appear at first sight that drawing labour from agriculture to support capital formation would be impossible, as it would mean condemning people to starvation.

However, in agriculture as in personal and domestic service, there appears to be a substantial volume of "disguised unemployment"—in the sense that many workers are engaged in less productive work than they are capable of, because they would otherwise be unemployed. If industries producing capital goods could be established and manned by this surplus labour, capital formation could be advanced without any reduction in standards of living.

This point needs elaboration because in the above context the term "disguised unemployment" has a wider meaning than usual. There is no doubt that most of the labour needed to build capital equipment will have to be diverted from agriculture and services, if only because most labour is in fact employed in these pursuits. The conditions in which such a diversion of labour could take place without appreciably reducing output are, however, a matter which requires close investigation. In some areas or types of farming, substantial numbers of workers could be spared without significantly reducing output; but in others, few workers could be spared unless farm methods were improved. Writing of a somewhat similar situation in Trinidad, one experienced observer noted that a fall in the agricultural population, brought about as a result of workers transferring to war work, was accompanied by a corresponding fall in agricultural output. He concluded, however, that the output could have been maintained by a considerably smaller number of agricultural workers if they had first been "provided with more instruction or better diet or more capital or greater

incentives''.¹ The term disguised unemployment, as used in the present discussion, thus covers not only directly wasteful employment but also the employment of substantially inferior techniques, however justified this may be in the existing circumstances.

Since it is from this disguised unemployment that workers must be drawn for the formation of capital, it follows that the change in agricultural techniques and the improvement of the productivity of agricultural workers to which reference has been made above is also essential for this purpose. It is not often sufficiently appreciated that in western Europe the agricultural revolution preceded the industrial revolution. In the countries of South and East Asia, they must occur simultaneously.

INCOME AND POPULATION GROWTH

Thus, if the countries of South and East Asia are to become more prosperous, a reduction in the numbers engaged in agriculture, an increase in the numbers engaged in industry, a complete revision of methods of production, and a rapid increase in the amount of capital equipment are required. These measures are necessary to increase total production so that average living standards may be raised. Production should obviously increase faster than population.

The first effect of an increase in production and in standards of living will be a reduction in death rates. These are very high in Asiatic countries, particularly among children. Death rates in the Asiatic countries for which statistics are available are in almost all cases above 25 per 1,000, compared with rates below 15 per 1,000 in most of the economically more advanced countries. Mortality rates are particularly high in Asiatic countries in the younger age groups, apparently the result in large part of malnutrition and inadequate care. Improved levels of nutrition, housing, clothing, and medical care, made possible by increased production, are likely, therefore, to have immediate effects in a substantial increase in population, as they did in all countries affected by the industrial revolution.

On the other hand, there is no reason to suppose that there will be any quick reduction in birth rates. Even after the in-

¹ Frederic BENHAM, in *Economica*, Aug. 1946, p. 210.

dustrial revolution in western European countries, birth rates remained high for approximately three quarters of a century after the fall of death rates commenced. The fall of birth rates was eventually brought about by a combination of several factors. Urban life is less suited than rural life to large families. Increased longevity means that the size of the family can be maintained although fewer children are born. People are gradually imbued with the desire to give their children a better education and a better standard of life. They come to want for themselves also a higher standard of living, and more leisure. In particular, as women develop new interests, they tend to have fewer children; many of them postpone their marriage to a later age, and thus reduce their opportunities for childbearing, and some do not marry at all. All these factors which contribute to a reduction in birth rates together bring about a fundamental and substantial change in social, economic, and cultural attitudes. It is inevitable that this evolution should take a long time, and that the reduction in birth rates should lag far behind the reduction in death rates, which is largely a purely physical phenomenon. Moreover, in Asiatic countries, the present attitude towards family life, which appears to favour high fertility, seems to be deeply ingrained in the people. In these countries the social evolution described above would need to be all the more rapid if its effects are not to be long delayed.

One well-known observer has stated the problem and the reasons for past failures to solve it, with reference particularly to non-metropolitan territories, in the following terms:

The uses to which technologically backward regions have been put, and the nature of the policies of the dominant nations towards them, have been such as to impede the transition to low fertility. Agricultural life has been promoted; native industries have faced the competition of established industries of technologically advanced countries. Industrialisation and urbanisation have developed very gradually. Moreover, in general and especially under the more enlightened colonial régimes, there has been considerable protection of native customs, religions, and social organisation, all of which foster the maintenance of high fertility. In short, the technologically advanced nations have disseminated and imposed that part of their culture which reduces mortality, while withholding, or at least failing to foster the transfer of, that part of their culture out of which the rational control of fertility and the small-family pattern develop. The population grows a good deal as it did in the West, but unlike

the situation in the West, the growth stage has not been accompanied by the social changes that eventually lead to an end of expansion.¹

If a substantial increase in population is inevitable, industrialisation will present a much more difficult problem to Asiatic countries than it did to European countries at the beginning of the industrial revolution. It is obviously impossible to specify categorically the optimum population for any area. The size of the optimum will change from time to time with the discovery of new resources, the development of transport and of new techniques, and the emergence of other new factors. Looking back, however, it is clear that the population of European and extra-European countries which expanded rapidly during the nineteenth century was too small in 1800 to exploit fully the potentialities set free by the development of the industrial revolution. It is clear also that the present population of western Europe is much nearer to what is required to exploit its resources fully, and that the current slackening of population growth in these areas need not be viewed with alarm from the point of view of maximising living standards. If it is at all possible to make a judgment about the optimum population for Asia over the next century or so, the only conclusion would seem to be that, in the light of world potential resources and of foreseeable developments in productive techniques, a high rate of population

¹ Frank W. NOTESTEIN : " Problems of Policy in Relation to Areas of Heavy Population Pressure ", in *Demographic Studies of Selected Areas of Rapid Growth* (New York, Milbank Memorial Fund, 1944), p. 147. The following observations may likewise be cited in this connection :

There are only two known curbs for a growth in numbers in excess of the means of subsistence : one is that of " nature "—starvation, disease, infanticide and exterminatory wars ; the other is urbanisation and higher living standards. Experience in the West has shown clearly that, consequent upon industrialisation, the rate of population increase slows down (Harold BUTLER : *Problems of Industry in the East, with Special Reference to India, French India, Ceylon, Malaya and the Netherlands Indies*, International Labour Office, Studies and Reports, Series B, No. 29, Geneva, 1938, p. 70).

And more recently :

Few social trends in the modern period have been as universal and persistent as the decline of mortality and fertility. Coming as a result of agricultural, industrial, and technical evolution, the declines were established first in mortality, and only after a considerable interval in fertility (Frank NOTESTEIN and others : *The Future Population of Europe and the Soviet Union*, League of Nations, Geneva, 1944, p. 26).

Reference may also be made to the memorandum, *Demographic Trends in Asian Countries*, prepared for the recent Asian Relations Conference by B. RAMAMURTI (New Delhi, Indian Council of World Affairs, 1947).

growth in Asia would not be compatible with a substantial increase in Asiatic living standards. The density of population in Asia today is much higher than it was in Europe in 1800. The opportunities today for Asiatic people to emigrate are much more limited than the opportunities for Europeans during the nineteenth century. With a high rate of industrialisation and modernisation, a population growing at a moderate and diminishing rate, in comparison with the present rate of increase, could be supported. The growth of population is in any case inevitable and must be provided for in planning. But a "population explosion" such as occurred in Europe would be fatal to the chances of economic improvement in Asia.

Asia today is in an extremely difficult situation. In so far as the process of industrialisation brings about a gradual rise in living standards, death rates will fall and the population will grow more rapidly than at present. If industrialisation is slow, the population is likely to catch up with the increased production, and real income per head will fail to rise.

If this difficulty is to be overcome, production must increase much faster than population. There are good reasons to hope that the rate of increase in production in Asiatic countries in the future could be much faster than was possible in Europe in the early stages of the industrial revolution. The industrial revolution in Asia will depend chiefly on the adoption and adaptation of productive techniques and organisation which have already been well developed in industrially advanced countries. The change can therefore be brought about much more rapidly than in Europe in the nineteenth century, when development depended almost entirely upon the pace at which new inventions and innovations were made and introduced. Moreover, while the economic development of Europe in the past was based chiefly upon the private initiative of business men, the economic development of Asia in the future will most likely proceed on the basis of a well-planned and co-ordinated programme under the direction and leadership of Governments. In these circumstances there should be less uncertainty, disorganisation, and waste of resources than occurred in the course of Europe's industrialisation. Thirdly, while industrialisation in Europe had to depend exclusively on domestic capital formation, capital accumulation in Asia can be accelerated by foreign aid, not only in the form of investible funds, but also,

thanks to the great productive capacity of the capital goods industries in some of the advanced industrial countries and particularly in the United States, in the form of supplies of the materials and equipment necessary for capital formation in Asia. Finally, the industrial revolution in Asiatic countries can also be greatly assisted by having recourse to the services of technical experts from the industrially more advanced countries who understand and are able to apply modern techniques of production.

Whether industrialisation can be promoted at a rapid rate depends ultimately, however, on the peoples of Asia. It is not merely a question of skill, or literacy, or health, or economic and social institutions. These can be developed—and quickly—provided that the people want them. This issue of social and cultural attitudes is fundamental to the question of the pace at which living standards can be raised. These attitudes will determine ultimately the rate at which production increases and the rate at which population increases.

This conclusion is so obvious as to need no elaboration. Clearly, the rapidity with which new industries are established depends in the first place on local enterprise and initiative. The possibility of acquiring capital equipment, important as it is, is a secondary factor. For the development of industries, the primary consideration is whether some workers are prepared to move from agricultural production to industrial production with all its social and cultural consequences. The rate at which total production increases depends on these factors and on the extent to which agriculturists are prepared to replace existing methods of production by more efficient techniques. The rate at which population grows will depend on what the peoples of Asia want and on the way in which they react to economic changes. If they want higher living standards, and if they make fairly rapid progress, through industrialisation, urbanisation, education, and the emancipation of women, towards attaining that end, a reduction in birth rates will be brought about quickly enough to prevent population growth from counteracting the effects of industrialisation. If, however, industrialisation and modernisation proceed but slowly and the reduction in birth rates is long-delayed, Asiatic countries will remain poor and the melancholy cycle of high birth rates offset by high death rates will continue.

CHAPTER VII

METHODS OF RAISING INCOME

The crucial factor in the poverty of the countries of South and East Asia is thus the population problem in its various ramifications. Industrialisation, capital formation, foreign borrowing, and other factors are of vital importance, but, in the final analysis, they cannot make a country more prosperous unless the problem of population is adequately dealt with. The core of the population problem in the Asiatic countries of the Far Eastern region, as has been shown in the foregoing pages, is the continued pressure of a predominantly agricultural population on the means of subsistence. The social environment is such that attempts to improve productivity per head are apt to be frustrated by the tendency of population to expand to the maximum that can be sustained by available production.

The present chapter is concerned principally with the national or local action that can be taken in the economic field as a means of tackling the problem of population and poverty. The emphasis throughout is on the underlying factors of economic life, rather than on the institutional arrangements through which policy may be made effective.

REDISTRIBUTION OF THE WORKING POPULATION

In all countries for which there are sufficient data, these suggest that there is a significant relationship between the national income per head of population and the proportion of the population engaged in various types of occupations. Occupations may be classified into primary employment, consisting chiefly of agriculture, secondary employment consisting chiefly of manufacturing industry, and tertiary employment comprising chiefly the service industries. Whether different countries are compared at the same date or whether the situation of one

country is compared at different dates, the following relationship seems to hold true: as a country grows richer, the proportion (though not necessarily the absolute number) of the population engaged in primary industry declines; the proportion engaged in secondary industries increases, though eventually at a diminishing rate; and, finally, the proportion engaged in tertiary industry also rises.

The existence of this tendency for wealthy countries to have a smaller proportion of the population engaged in agriculture does not necessarily imply that the productivity of secondary and tertiary industries is higher than that of agricultural industries. What it does mean is that, as a result of improvement in methods of production, agricultural industries become so efficient that the application to them of a steadily decreasing proportion of resources can produce food for the population as well as raw materials for industry. Consequently, a steadily increasing proportion of resources can be released for secondary and tertiary production. It is not the particular distribution of industries that makes countries prosperous, but rather the high productivity of resources in all types of production which permits the particular distribution of industries.

Substantial variations from the general tendency must naturally be expected, depending on the particular resources available to each country and its general social and economic structure. The extent to which raw materials are available locally will determine some of the variations; and the extent to which land is available in relation to the population will determine both the income and the numbers of the population making a living from the land. Australia and New Zealand are examples of countries with a high proportion of land and other resources to the population and with high incomes per head. As in the United States and in western Europe, and in contrast to Asiatic countries, the peoples of Australia and New Zealand have deliberately limited their numbers and have adopted efficient and highly capitalised methods of production in order that they may maintain the high standards of living which they demand.

The redistribution of the working population between various types of employment has been going on in industrialised countries for a considerable period. In countries whose economic system is based mainly on private enterprise, this

movement of workers from primary to secondary and tertiary employments is brought about through differentials in wages and in employment opportunities. These differentials arise from differences of productivity in different occupations. The redistribution of population comes to an end when the productivity, and hence the remuneration, of the workers is approximately the same no matter where they are employed. The process takes time even in the best of circumstances, and continues as long as there is technological progress. It is mainly a process of industrialisation and urbanisation and therefore reduces the pressure of population on the land.

If the raising of living standards through raising the productivity of workers and redistributing an increasing number of them into new occupations is to be facilitated, certain conditions which are not always clearly recognised must be fulfilled. These conditions are largely absent in Asiatic countries. In the first place there must be occupations where labour productivity is higher, into which workers in less favoured employments can move. Such openings for more productive employment, the existence of which is largely taken for granted in the industrialised economies, are essentially limited in Asiatic countries. These countries are short of the capital, as also of entrepreneurs who could build up the capital, essential to create such openings and to raise the productivity of workers.

Secondly, the pace of development must be rapid. This is necessary for several reasons. In many cases, the establishment of new industries will lead to a contraction in handicraft production. New and more efficient industries will require the employment of substantially fewer workers to produce the same output as was formerly produced by handicraft industries. Therefore, if unemployment among handicraft workers is to be avoided, industrial output and employment must expand rapidly, in order to create new employment opportunities for displaced rural workers. Similarly, as has been pointed out in Chapter II, many agriculturists depend for a large part of their income on their earnings from part-time occupation in rural industries. If the development of modern industries results in depriving them of much of these earnings, it becomes all the more important to raise the level of incomes derived from purely agricultural occupations. This means that the productivity of agriculture must be raised, side by side with

the establishment of new industries. The most important part of any programme to raise agricultural productivity must be a substantial reduction in the numbers working on the land. For this reason again, the pace of industrial development must be rapid in order that surplus agricultural population may find productive employment. Consideration might also be given, however, to methods of improving the economic organisation of village industries which can provide seasonal occupation and income for agriculturists who are not fully engaged in farm work throughout the year.

Thirdly, unless industrial development is rapid, the wages and real incomes of workers will not rise very much. It is true that, to the extent the more capital per worker is available in rural industries, and to the extent that production is better organised, the productivity of labour will increase. However, if relatively few of these industries are established and if there are many workers competing for employment in them, the increase in productivity will not lead to an equivalent increase in wages. The wages of skilled workers will rise if skill is relatively scarce—but in that case industrialisation will proceed only slowly. If the real income of the great mass of workers is to rise substantially, industrialisation must proceed rapidly so as to create a large demand for labour in general.

Finally, as will be shown in more detail below, since the economies of the countries of South and East Asia are likely always to be mainly agricultural, the living standards of the mass of the population can rise substantially only if agricultural production is made more efficient. This will not only increase agricultural output, permitting the release of workers for other production and reducing the dependence of agriculturists for their subsistence on rural industries, but will also, by making all workers more productive, increase their bargaining strength and so enable them to secure wages corresponding more closely to their increasing productivity.

IMPORTANCE OF THE MOBILITY OF LABOUR

For the process of redistribution of the population outlined above it is not sufficient merely that alternative employments should exist; people must also be mobile in order to make

use of the better opportunities. Such mobility exists only on a limited scale in most parts of South and East Asia.

The limited degree of mobility is in part a consequence of inadequate transport facilities; but traditional attitudes, and especially the traditional specialisation of particular social groups in certain occupations, are often no less serious an obstacle to movement than lack of transport.¹ Besides transport facilities and the breaking down of traditional barriers closing the door to different occupations, the creation of greater mobility requires education, vocational training, and the provision of information as to opportunities for more productive employment. For a fuller discussion of this aspect of the problem, reference may be made to the sections on employment organisation and vocational and technical training in the report on item II on the agenda of the present Conference.² It must suffice here to call attention to the special importance of popular education on the widest possible scale and of more specialised vocational training, in any programme of economic and social development. The following observation in respect of China made by a Chinese economist is true of all Asiatic countries of the Far Eastern region, and indeed of all countries in other underdeveloped parts of the world :

China will have to launch a large-scale programme of educational reform with a view to preparing the vast illiterate agricultural population for industrial development, to be carried out simultaneously with a system of vocational education for the training of mechanics and skilled workers, just as other newly industrialised nations, Japan for example, did many decades ago.³

In stressing the importance of increased mobility of labour, it should be remembered that a considerable part of the capital equipment required in Asia will consist of buildings and trans-

¹It may be recalled that the influence of traditional attitudes and prejudices in limiting the mobility of labour is not confined to the countries of Asia. Race prejudice and the notions of "men's work" and "women's work" are examples of such factors which operate in other parts of the world as well.

²*Op. cit.* ; see, in particular, pp. 113-114 and 127-139. Reference may also be made to International Labour Conference, 30th Session, Geneva 1946, Report V. (1) : *Employment Service Organisation*, which contains information on the present state of employment services in different countries, including China (p. 266) and India (p. 294).

³H. D. FONG : *The Post-War Industrialisation of China* (Washington, National Planning Association, 1942), p. 14.

port facilities, the construction of which can be carried out in large part by workers residing in the localities concerned. In view of the present degree of immobility of the population, this is a fortunate circumstance. It remains true, however, that for the staffing of new factories and the further development of any broad programme of industrialisation, increased mobility of labour is essential in order that a sufficient number of workers may be available in each place where they are wanted and, more particularly, in order that the limited supply of skilled workers will be efficiently used. Without such increased mobility, industrialisation and capital formation might be so slow as to be brought to a standstill.

MEASURES TO INCREASE THE PRODUCTIVITY OF AGRICULTURE

Since it takes time, even in the best circumstances, to bring about a greater degree of mobility and to train sufficient numbers of workers of different skills, a programme of industrialisation is not by itself sufficient to raise the living standards of the masses quickly. It must be accompanied by a more efficient organisation of agriculture. Even such an ambitious programme as the "Bombay Plan"¹, which contemplates a threefold increase in the total national income of India and a doubling of average income (allowing for population growth), through rapid industrialisation over a period of 15 years, would leave a very large proportion of the Indian people in agricultural pursuits. According to the plan, the proportion of national income produced by industry, which in 1931-1932 was 17 per cent., would be 35 per cent. at the end of the period; the change for agriculture would be from 53 per cent. to 40 per cent.; for services, from 22 per cent. to 20 per cent.; and for other occupations, from 8 per cent. to 5 per cent.

The Bombay Plan is mentioned because it is one of the most ambitious industrialisation plans as to the extent and the speed with which it is proposed to be carried through. Even in this plan agriculture remains the most important avenue of employment. Industrialisation and the improvement of agriculture must therefore proceed simultaneously. Without rapid industrialisation, workers cannot be shifted in sufficient numbers out of agriculture; but even with as rapid an advance of

¹ The name by which *A Plan of Economic Development for India*, published in Bombay in 1944 by a number of prominent Indian industrialists, is generally known.

industrialisation as is envisaged in this plan, the workers employed in agriculture would still be so numerous that, without a substantial improvement in agricultural technique and organisation, their income, and the average income of all workers, could not be raised sufficiently. There is the further consideration, mentioned earlier¹, that unless the productivity of workers remaining in agriculture rises to offset any decline in their numbers, industrialisation could not be promoted without an immediate fall in the volume of home-produced farm products available for consumption.

There can be no question of the countries of South and East Asia ceasing to be agricultural countries. The United States did not cease to be an agricultural country when it became the foremost industrial country of the world. The real problem is to determine how to employ all the resources of the Asiatic countries—the land, the raw materials, and, above all, the peoples—more efficiently; this is clearly recognised in every important development plan prepared for the countries considered. It is therefore essential to examine in what way agricultural productivity can be raised.²

The first consideration must be the amount of land that can be made available per agricultural worker. To say that the countries of South and East Asia are overpopulated is not to suggest that no more land is available for settlement. This is not the case. Population density varies greatly from country to country. Though precise information is lacking, even China, India, and Indonesia appear to have some reserves of unused land. According to a recent survey of the Indian provinces, some 90 million acres of cultivable land, or 26 per cent. of total cultivable area, are still unused. The figures of land utilisation are as follows:

					Million acres
Land under forests .. .. .	..	..	..	..	68
Land not available for cultivation .. .. .	..	..	..	..	93
Cultivable waste land .. .. .	..	..	..	..	92
Current fallow .. .. .	..	..	..	..	45
Cultivated land .. .. .	..	..	..	..	214
Total area ..					512

¹ See above, Chapter VI, pp. 147-148.

² For an illuminating analysis of the need for, and problems of, rural reorganisation in India, see T. T. SINGH : *Poverty and Social Change* (Longmans, Green & Co., Ltd., Calcutta, 1945).

India has evidently not yet exhausted the supply of cultivable land. Figures of population density in Indonesia show striking differences between different regions. In 1930, the density of the population in Java and Madura was 315.6 persons per square kilometre, in the Outer Provinces 10.7. The scope for increased cultivation and the expansion of population in the Outer Provinces is, however, much less than these figures might suggest:

The greater part of the country is covered with forests..the soil is on the whole less fertile, the rainfall less favourable..; the available water is, as a rule, inaccessible for irrigation purposes. For all these reasons, extensive cultivation is the only possible form of agriculture, and vast tracts of country are doomed to be left untilled. Where conditions permit of the application of an agricultural system corresponding with that of Java, we find areas that might compete with Java in respect to density of population. For instance, the populations of Bali and Lombok, expressed in terms of arable area, are equal to those of Jogjakarta.¹

Notwithstanding all these reservations, Indonesia also has more land suitable for cultivation. In China, likewise, there is some, though certainly not first-grade, additional land available for cultivation. "Much of China is uncultivable, owing to lack of moisture, excessive cold, mountains, or poverty of soil. But not all that is cultivable is actually cultivated."² And "certain provinces of China proper, if adequately equipped with communications, would probably carry a larger population; but scientific opinion does not seem at present to support the suggestion that the cultivated area could be greatly increased by extensive machine farming."³

In other parts of South and East Asia the population pressure is considerably less than in the three countries mentioned. The further extension of cultivation might therefore be an appropriate first step towards improving the standard of living of the agricultural population. In so far as the present non-

¹ J. H. BOEKE: *The Structure of Netherlands Indian Economy* (New York, Institute of Pacific Relations, 1942), p. 173. The State of Jogjakarta has a population density of 497 per square kilometre, or 615 per square kilometre of arable land, or 665 per square kilometre of arable land under cultivation during the year.

² R. H. TAWNEY, *op. cit.*, p. 28. Mr. Tawney adds: The materials used however, are several years old, and owing to the colonisation of Manchuria, the acreage [of the area under cultivation] has increased in the interval."

³ *Ibid.*, p. 105.

utilisation of available land is due to peculiarities of the existing social organisation—notably to customs which tie people to existing village communities—any extension would require widespread social changes. The social environment is not, however, the sole obstacle to the extension of cultivation. The distances involved are great, necessitating the provision of new transport facilities, and in certain areas considerable capital may be required for irrigation, marketing organisation, and other measures of development.

The physical reorganisation of existing farms would undoubtedly improve the efficiency of agriculture. The small size and the fragmentation of farms lead to a waste of manpower—the mere physical effort of walking from one field to another and to and from the farmstead is wasteful—and make next to impossible the adoption of better methods of cultivation. It might be objected that it is inappropriate to speak of a waste of manpower in countries which have an overabundance of human labour. But this surplus is closely linked to the low level of production and income, and is a conspicuous example of disguised unemployment. These unemployed and under-employed persons are the main source of labour for any industrial expansion.

The problem of split-up farms is not peculiar to Asiatic countries. It can be solved in several ways. The consolidation of farms—a process which most countries of central and eastern Europe went through during the 19th century—is one method. Another method might be co-operative farming by the integration of tracts of land belonging to neighbours. Which method, or which combination of methods, is desirable will depend on the particular circumstances of the different countries. There are ample precedents in Asia and Europe to show the effectiveness of both methods mentioned. Neither would require the expenditure of capital, domestic or foreign, and either of them would raise the efficiency and hence the output of agricultural labour.

The consolidation of farms and co-operative farming should facilitate the application of more efficient farming methods requiring capital outlay, as for instance by irrigation projects or by the use of modern implements and machinery. Co-operative ownership by a group of farms, a village, or even a group of villages, of such farm implements as threshers and

co-operation is common in European countries and not unknown in Asia. There seems little, moreover, in the idea of co-operation which runs counter to the established social customs of the countries under consideration here.¹

The capital outlay required for irrigation and for the purchase of farm equipment may have to come in part from foreign sources. In some cases the assistance of foreign personnel may be required for short periods, in order to train farmers in the use and maintenance of the new machines.

The improvement of methods of production should not, however, be confined to the introduction of capital equipment. More advanced scientific methods in general, better seeds, the elimination of pests and plant diseases, and the improvement of breeds of livestock are important if agricultural production is to be raised from its present low level.

Besides these improvements in methods and equipment, improvements in economic organisation seem essential for real success. As has been seen above, the large volume of rural indebtedness is a heavy burden on farmers; rents are high and the incomes of the large mass of tenant farmers are correspondingly low. There is ample scope here both for land reform and for the development of rural credit facilities. Simple legislation fixing statutory maximum rates of interest is admittedly ineffective. A better organisation of the money and mortgage markets and of the banking system would go a long way towards lowering the interest rates for farmers. Rural credit co-operatives could play an important part, particularly in the provision of short-term credit. Existing rural indebtedness might be relieved by compulsory conversion on more reasonable terms. Such conversion might be effected by Governments being prepared where necessary to take over old mortgages, or to repay loans, or scale down loans. Such policies have proved successful in the United States, and there is no reason why they should not work in Asia. The difficulty of establishing a well-organised money and mortgage market should not, of course, be underestimated. Political stability and a strong Government capable of enforcing law and order in all parts of the country are prerequisites. So is a population sufficiently educated to appreciate the value of these new

¹ The scope for co-operation in agriculture in the East is discussed in greater detail in the report on item II of the agenda, *op. cit.*, pp. 47 et seq.

measures. To build up a money market and a banking system covering a whole country, it is moreover necessary that there should be an extensive transport system linking the various regions, to facilitate the exchange of goods and the movement of population. It will thus be seen that industrialisation and the development of transport facilities are as essential to agricultural improvement as the raising of farm productivity, and income is to the effective enforcement of plans for industrialisation.

The larger the number of farmers who can be released and be reabsorbed in other employment, the more easily can progress be made with the consolidation of farms and the improvement of agricultural methods. New land offers only limited possibilities. While the average density of population would, of course, not be changed by a redistribution among different occupations, the density of the agricultural population could undoubtedly be greatly lowered by urbanisation and industrialisation. The striking fact about the distribution of population in China and India, for example, is the small proportion that lives in villages or towns of any substantial size. In these countries, and wherever similar conditions prevail, it is not only necessary to absorb some of the population into industry, but also desirable to redistribute the non-industrial population so that a larger proportion lives in large centres. It may prove advantageous on economic grounds to encourage the growth of larger villages and towns.

The discussion thus far has been devoted mainly to the methods of raising the physical productivity of agriculture in Asiatic countries. To improve the real income and living standards of the agricultural population, it is, however, not sufficient merely to expand agricultural output; it is equally necessary that the prices at which the increased output is sold should prove remunerative to the agriculturists. The latter condition is of special importance, both because the demand for agricultural products, particularly food, is comparatively inelastic and because, as agricultural output increases, an increasing proportion will be sold for the cash income which the agriculturists will require in order to be able to buy goods and services.

If industrial development is rapid, the industrial workers' demand for food will rapidly rise with increases in their

income, and the demand for agricultural raw materials will also increase. Only as the demands from these industrial sources expand, will improvements in agricultural productivity bring full benefits to the agriculturists themselves. As the Preparatory Commission on World Food Proposals of the United Nations Food and Agriculture Organisation pointed out in its report published in 1947 : " The buying power of the non-agricultural population must rise at a speed which matches the increase in food production so that food can be paid for at reasonable prices. Otherwise the increased agricultural output will begin to pile up unsold or to drive prices down to crisis level." This is a further illustration of the close interdependence of agriculture and industry in the process of economic development.

In addition to the question of the effects of increased agricultural productivity on the trend of farm prices, attention must also be directed to the problem of excessive fluctuations, both seasonal and cyclical, in these prices. The disastrous effects of these fluctuations upon the incomes of primary producers has been fully demonstrated by the past experience of those countries of South-east Asia which depend largely on the proceeds from a few export crops. A prerequisite to the improvement of the living standards of the primary producers in these countries is, therefore, the assurance of reasonable stability of the prices of their products at levels fair to producers and consumers alike. Since the prices of these agricultural products are determined by world conditions of demand and supply, effective stabilisation will no doubt require co-ordinated international action. The forms which such action might take have recently been under consideration by the Food and Agriculture Organisation of the United Nations, and proposals have been made in the above-mentioned report for intergovernmental arrangements designed to promote the price stabilisation and increasing consumption of a number of important commodities.

SOME PROBLEMS OF INDUSTRIALISATION

The chief problems which a proposed programme of industrialisation raises are, first, the extent of the industrialisation; second, the nature of the industries to be established; third,

the order of priority for the establishment of the industries if they cannot be established simultaneously; fourth, the localisation of the new industries; fifth, the pace of the industrialisation; sixth, the question of management; and seventh, the relative emphasis on large-scale and small-scale industries. The approach to the over-all problem of the financing of the industrialisation would depend at least in part on the solution to these problems.

Decisions on most of the problems will have to be taken simultaneously. In Asiatic countries certain indispensable resources are extremely scarce and will have to be allocated carefully. This is, as has repeatedly been stated, especially true of skilled labour and of capital. The decision to build up one industry first rather than another, or the decision to speed up the development of certain industries while retarding that of others, must be taken largely with reference to the relative scarcity or abundance of various resources, including foreign exchange. The question of foreign loans will be specifically dealt with in the next chapter. It must not be lost sight of, however, even when purely domestic matters are being considered, since decisions on such matters affect the demand for foreign exchange in many ways.

The conflicting claims of different industries will have to be reconciled. The availability of raw materials is a determining factor: obviously coal cannot be mined where none is present. But definite limitations of this kind exist only in rare instances. The pace of industrialisation might be left to be determined by the play of "natural" forces or it might be accelerated by planned Government intervention. The abundance of cheap labour together with high interest rates are incentives to developing first those industries which use relatively much labour and little capital, such as leather goods, textiles, and pottery. If on the other hand, such a process is considered far too slow, vigorous Government action might be taken to expedite the process of capital formation and industrialisation. So long as unemployment, open or disguised, persists, industrialisation can be extended without lowering the standard of living of the masses. However, when no more unemployed resources are available or when specific bottlenecks are encountered, further capital formation will be possible only at the expense of the production of consumers' goods. It is true

that there is a considerable amount of disguised unemployment of unskilled labourers in Asiatic countries, but supplies of skilled labour and of specific capital equipment of the more modern types are short. The effect of these shortages is likely to be felt fairly early. The pace of industrial development—or, in other words, the extent of the sacrifices that can be imposed upon the population at large—will have to be determined at a relatively early stage. Political considerations will no doubt be the determining factor, but some of the implications of any such decision may be briefly indicated here.

The location of new industries is an important question in preparing any comprehensive plan of economic development. In the case of extractive industries, the location is determined by unalterable natural conditions. In the case of other industries, a considerable dispersion may indeed be one of the objectives of any general plan. Hitherto, modern industries in South and East Asia have been more or less concentrated in a few cities, usually on the seaboard as they have been in large part financed by foreign capital and dependent on imported raw materials and oversea markets. The tendency should be for the new industries to develop to a larger extent in the interior, in locations determined by the distribution of population, raw materials, and transport facilities.

The location of industries is a problem which has international as well as national aspects. The Asiatic countries of the Far Eastern region are in an early stage of industrial development, but between them they possess a wide variety of resources. In planning their industrial development, it would be uneconomic for each country to attempt to establish an unduly large range of industries. Each country can gain by specialising in those industries for which it is most suited. Each can be the more certain of its ability to import the products of other industries, and to pay for those imports by its own exports, if all the countries concerned resort to such specialisation. This question is further considered in the next chapter, which also deals with the question of foreign borrowing. In the present connection it is sufficient to point out that while foreign loans can help to speed up the process of industrialisation, such development must be based largely on local resources.

A considerable part of the capital formation needed in the

early stages of any development programme is of a kind which calls for the use of a large volume of unskilled labour. Much of this capital formation must consist of the building of physical structures: houses, factories, industrial and commercial structures, roads, canals, railways, and so on. It has been estimated that in any country, a large portion—perhaps 50 per cent. or more—of the total real capital resources consists of buildings and structures. Thus it will be comparatively easy to employ domestic resources, and in particular to draw on the large number of unskilled workers, for the construction of domestic capital. In fact, this capital has perforce to be constructed, and industrialisation furthered, principally on the basis of domestic production.

This question, too, is important in relation to foreign borrowing. Because so much of the most urgently needed capital consists of buildings and structures which have to be erected on the spot and with labour-intensive methods, Asiatic countries can rely on their own resources for much the greater part of their development. Foreign loans will in fact be essential for two purposes only: to finance imports of plant and equipment which can be produced only, or more cheaply, abroad, especially items needed to overcome specific bottlenecks in production, to the extent that such imports cannot be financed out of the receipts from current exports; and to finance imports of consumption goods to mitigate the sacrifices imposed on consumers by the development programme.

The Order of Priority

The likelihood of quick returns is obviously an important consideration in determining the order of priority in which industries should be developed. It is true that the diversion of resources to capital investment reduces the output of consumers' goods for a time, but this period differs in duration with different types of investment. It is for the planning authorities in each country to determine, in the light of local circumstances, the types of investment to be undertaken at each stage. Such selection is one of the most important functions connected with planned development.

The improvement of productivity in agriculture is particularly important, having regard to its place in the economies of Asiatic countries in the Far Eastern region, and the fact

that the cultivators are the main source of labour supply for new industries. It may, therefore well be that judicious investment in the improvement of soil fertility and farm equipment is the type of capital investment which will yield speedy returns. Should this be the case, high priority should be accorded to the production of fertilisers and farm tools and machinery as well as to the improvement of farm methods in general.¹

The farmer, however, will have no incentive to increase his output if he cannot be sure of being able to sell it. Improvements in transport and communications to enlarge the market for farm produce are, therefore, an essential part of any programme for the improvement of agriculture; and it is only through adequate and cheap transport that the products of the farms can be brought to consumers at prices within their means, thus helping to raise living standards for the people as a whole. As an instance of conditions in Asiatic countries resulting from the lack of an adequate system of transport, the following observation by Mr. Tawney in his study of *Land and Labour in China* (pp. 55-56) may be cited :

Except for certain limited areas, railway and motor traffic are insignificant, and, as far as the mass of peasants are concerned, might as well not exist. Apart from water, the usual means of transport are carts, mules and donkeys, especially in the north; wheelbarrows of a size which almost make them into carts propelled by men; and the shoulders of human beings. Bad communications and primitive methods make the cost of moving crops far afield almost prohibitive. Mr. Arnold has remarked that if farmers in Shensi were to make a present of their grain to millowners in Shanghai, it would still pay the latter better to import grain from Seattle than to pay its freightage in China; while rice is fetching \$10 in Hangchow, it is sold at \$15 in the hilly regions of the same province; wheat has been known to sell in Szechwan at barely more than one tenth of its price on the eastern coast; in parts of the country the expense of moving it 50 miles exceeds its price in the place where it is grown. As a result, there are a multitude of little localised markets, in which prices fluctuate violently with every change in the local supply, and, while consumers in one region are threatened with famine, farmers are ruined in another because they cannot dispose of their surplus.

¹ Cf., for example, the recommendations of the Crops and Soils Wing of the Board of Agriculture and Animal Husbandry in India (1948), cited in the report on item II, *op. cit.*, pp. 75-76, and those of the Advisory Board of the Imperial Council of Agricultural Research, cited in *Wartime Labour Conditions and Reconstruction Planning in India*, *op. cit.*, p. 91.

An adequate system of transport and communications is likewise essential for the facilitation of labour mobility, and the development of a money market. Transport and communications condition at all stages the pace and direction of economic development. By appropriate planning of transport and communications, the location of new industries and the rate of development of different areas can be determined in accordance with an over-all plan designed to further the interests of the population as a whole. There can be little doubt, therefore, that the improvement of transport and communications must have a high place on the list of priorities in any comprehensive programme of economic development.¹

The development of electric power is also important. As has been noted in Chapter IV, the Asiatic countries of the Far Eastern region differ markedly as to the extent to which they have developed electric power and as to their potential reserves. In none of these countries is such power at all sufficiently developed at the present time. Electricity is of special importance to modern industry, and its contribution to the amenities of daily life need not be stressed. It should also be noted that the supply of power will influence the location and the nature of the industries to be developed as well as the extent and pace of urbanisation. The experience of the Tennessee Valley Authority has shown how greatly the production of cheap and abundant power can influence the development of a whole region. It has also shown in a striking manner how a region may be treated as a unit, to the benefit of everyone concerned.² Thus the development of electric power also seems bound to occupy a high place on any list of priorities.

It may be more difficult, however, to reach common agreement on the relative importance of industries from certain other points of view. What, for example, should be the order of priority to be accorded to capital goods industries as against consumers' goods industries, or to domestic industries as

¹ It is of interest to note the importance attached to this point by Mr. Tawney. "To the layman," he writes, "it appears that the most effective way of aiding China to attain both a larger measure of economic well-being and political stability would be an international loan, with the necessary safeguards against undue interference in her internal affairs, for the purpose of enabling her to improve her communications."

² Cf. Herman FINER: *The T. V. A.: Lessons for International Application*. International Labour Office, Studies and Reports, Series B, No. 87 (Montreal, 1944).

against consumers' goods industries, or to large-scale as against small-scale industries?

Relative Importance of Consumers' and Capital Goods.

The arguments in favour of giving the production of capital goods priority over that of consumers' goods are briefly as follows. If the formation of capital is accelerated, it will lead to a more rapid rise in incomes inasmuch as the workers can be provided more quickly with larger supplies of the tools of production. As capital is scarce, it is necessary that considerable effort should be devoted to the early and rapid development of the capital goods industries. And as some of the capital has to be borrowed from abroad in the form of machines, the quick formation of capital at home will make a country more rapidly independent of foreign aid. (This does not, of course, imply that self-sufficiency in capital goods industries is a desirable or even a practicable aim for the countries considered here. For a long time to come the older industrial countries are likely to be able to produce most machines and capital goods more cheaply, as a rule, than the countries at present in process of being industrialised. In the present circumstances, it will be to the advantage of all concerned if the countries of South and East Asia continue to import some types of machines and capital goods and to pay for them with exports of those goods in the production of which they have a comparative advantage.)

On the other side, it is argued that the more rapid development of the capital goods industries implies that consumers' goods industries will expand less rapidly than might otherwise be possible. The standard of living of the population, which is extremely low and has deteriorated further as a result of the war, could be raised for a time much faster if all available resources were used for the development of the consumers' goods industries. In most countries the consumers' goods industries have already been started, and they require relatively less capital than the machine-producing industries. For these reasons, the case for the early development of consumers' goods industries will undoubtedly find strong advocates.

One factor which may influence the extent to which resources are allocated to capital goods industries is the current estimate of the urgency to be attached to the needs

of national defence. Except in so far as the capital goods industries considered necessary for defence are the same as are needed for development in the interests of social welfare, any priority accorded to them will be at the expense of the contribution that other industries could make to the raising of living standards. There is little else that can usefully be said here on this matter, except to express the hope that, as the United Nations increases in strength, Governments will be able steadily to reduce the importance attached to the requirements of defence in framing development plans.

Relative Importance of Export and Domestic Industries.

In assessing the relative importance of export industries and of industries catering for the home market, a variety of considerations have again to be taken into account, some of which are similar to those just reviewed. In general, however, it can be said that the division of labour should be extended as far as possible because such division, whether domestic or international, leads to a rise in productivity and the standard of living. International extension of the division of labour means that, each country tends to produce those goods which it can produce relatively cheaply. The export industries sell in competitive markets in which they enjoy no protection; for that reason alone they tend to be among the most efficient industries in any country. It is often preferable, in order to make the best use of national resources, to import some goods and to pay for them by exports rather than to produce them less efficiently at home. To the extent that this is the case, the standard of living can be raised to higher levels by an early and vigorous development of export industries.

Countries in process of development need a considerable volume of foreign exchange. This is required in part to service their foreign loans, whether incurred in the past or currently incurred for developmental and other purposes, and in part to pay for necessary imports of capital equipment, raw materials, and consumers' goods which cannot be financed out of foreign borrowing or produced economically at home. As the total requirements of foreign exchange are likely to be considerably greater than the amount available from foreign loans, a substantial volume of exports will have to be maintained. Moreover, the amount of such loans and the terms on which they

can be obtained will be influenced by the extent to which the countries concerned show promise of building up a volume of exports sufficient to finance the service of the loans. The export industries which have already been developed to a considerable extent in the Asiatic countries of the Far Eastern region must therefore occupy an important place in any further programme of development.

In certain areas, it is true, export industries are already so well developed that other lines of development may well be given more emphasis. This applies notably to those areas in which the production of a small group of raw materials for the international market has been the dominant activity. In their case, so long as the world market for raw materials is subject to abrupt fluctuations, the development of local industries producing directly for the home market will be one means of protecting the level of economic activity from the consequences of fluctuations originating abroad. It is to be hoped, however, that considerations of this kind will come to play a diminishing part in the determination of economic policy, as a result of national policies designed to maintain full employment and of international institutions and arrangements designed to foster a high level of balance of trade. For countries like China and India, such considerations will in any event have little relevance, inasmuch as the economies of these countries are bound to be highly diversified and production for export will be only one among many types of activity.

Relative Importance of Large-Scale and Small-Scale Industries.

The relative importance of large-scale and small-scale industries in a programme of economic development has also to be weighed. If productive efficiency is to be the sole criterion, there seems little doubt that in many types of production, large-scale industries, that is, industries consisting mainly of large producing units using much capital per worker, mass production techniques, and scientific management and research, are superior to small-scale industries. They are able to produce at lower costs per unit of output and, consequently, can afford to sell their products at lower prices and to pay the workers higher wages. Furthermore, as the number of producing units in large-scale industries is relatively small, it is much easier

for Governments to provide them with various forms of assistance, financial, technical, and other, for the purpose of promoting their efficiency and protecting the interests of their workers.

As against these advantages, there are certain adverse social and economic consequences which may arise from the development of large-scale industries. The most serious is the risk of unemployment and impoverishment of workers engaged in rural and urban handicraft industries. The speed with which these workers can be transferred to other, more productive industries will depend largely upon the rapidity of capital accumulation, the volume of modern business enterprise, and the workers' own mobility. Unless positive measures are taken to facilitate such transfers, it is by no means certain that the establishment of large-scale industries will bring immediate benefit to the working classes.

Large-scale industries are likely to be concentrated in a limited number of industrial centres. Because of transport difficulties and the low mobility of labour, a large part of the labour force required by these industries will probably be drawn from the neighbouring rural areas, instead of from the ranks of handicraft workers who become unemployed in more distant parts of the country. Any large exodus of labour from agriculture will reduce the output of food unless agricultural productivity rises concurrently as a result of agrarian reforms and improved agricultural techniques. Such improvements usually come about only slowly, and there is a danger that in its early stages the development of large-scale industries may accentuate the shortage of food.

The growth of large-scale industries may also lead to the concentration of economic power. Because of the high capital investment involved, and the consequent difficulty of establishing new firms, such industries frequently tend to be more or less monopolistic in character; and in countries in the early stages of industrial development, where modern enterprise is apt to be insufficient, this danger may be particularly acute. Consequently, the consuming public is likely to secure less than its full share in the fruits of economic progress, and the gains of monopoly profits may accentuate the inequality in the distribution of income and wealth.

Last but not least, the rapid introduction of large-scale indus-

tries in Asiatic countries, with its concomitants of regional concentration and urbanisation, may have serious disruptive effects on the traditional modes of living of the people. It will necessitate profound changes in social institutions and in the scales of values by which the peoples of these countries have lived for centuries. It is true that the process of economic development is bound to involve a transformation from an agricultural into an industrial culture in these countries. But it would seem desirable to avoid the overwhelming impact of the sudden cultural change which might be brought about by the rapid introduction on a large scale of new and radically different forms of economic organisation. The general welfare of the people would scarcely be promoted if economic gains were obtained at the sacrifice of a harmonious and integrated cultural, social and emotional life.

The above considerations are, of course, not intended to suggest that large-scale industry as a form of industrial organisation is entirely unsuitable for the economic and social climate in Asia. On the contrary, there are certain industries, particularly the capital goods industries, which, for technical and economic reasons, can be developed only on a large-scale basis. One familiar example is the iron and steel industry. But these considerations do point to two conclusions: first, the extent to which the economic benefits of large-scale industries are shared by the mass of the population will depend on the effectiveness with which the development of large-scale industries is co-ordinated with measures to accelerate capital accumulation, to encourage modern enterprise, to raise agricultural productivity, to improve the mobility of labour, to control monopoly practices, to protect the working conditions of industrial labour and to facilitate the process of cultural adaptation. Secondly, the development of large-scale industries needs to be supplemented by a parallel programme for the establishment of small-scale industries diffused in towns and villages all over the country; this will involve both the modernisation and reorganisation of the traditional handicraft or cottage industries and the development of new simple industries with small capital investment.

Many advantages may be secured from such a programme. Most important among them is the productive employment and income it can provide for the surplus rural population,

particularly in long slack seasons, with little disturbance to the structure of the rural community. These small undertakings will also have the advantage of operating at low overhead and distribution costs compared with those of large factories. Furthermore, as industries of this type require only a small capital investment for each individual undertaking, and as they draw chiefly upon local labour and raw materials, they can be established readily without waiting for the completion of the preparation of a comprehensive development plan, which might take considerable time. Unlike large-scale industries, small-scale local enterprise need not wait upon the development of a nationwide transport system. Finally, decentralised small industries may be more conducive to the preservation of the health of the workers than large-scale factory industries concentrated in overcrowded areas.

Any concrete plan for the development of small-scale industries will raise a host of questions. How should the small-scale industries be organised? To what extent can co-operative methods be used? What types of industries are best suited for decentralised small-scale production?¹ How are these undertakings to be co-ordinated with the development of large-scale undertakings in such a way as to make them complementary to each other? What policies should be pursued to ensure such co-ordination? What methods of production, what kinds of capital equipment and skilled labour are appropriate for these industries? Where will the managerial personnel come from and how are they to be trained? How can these industries be best financed? What differences in productivity and cost will there be between small-scale and large-scale undertakings engaged in making the same type of product? What measures should Governments adopt to initiate and promote the development of small industries? What administrative difficulties might Governments encounter in carrying out a development programme of this nature?

Asiatic countries have already had considerable experience with small-scale industries, the results of which should provide

¹ On this point, reference may be made to a statistical analysis of the suitability of different types of industries for small-scale operation in the United Kingdom by Professor P. SARGANT FLORENCE: "The Selection of Industries Suitable for Dispersion into Rural Areas" (with discussion on the paper), in *Journal of the Royal Statistical Society*, Vol. CVII, Part II, 1944, pp. 93-116.

useful guidance for future development : for instance, the growth of seasonal agricultural processing industries, the attempts at the reorganisation of handloom industries, and particularly the rise of the new small-scale powerloom industry in India, the Government's programme of co-ordinated expansion of large and small industries in Indonesia during the ' thirties, and the wartime developement of village industrial co-operatives in China. In this connection the recent work in the field of small industries done by the Agricultural Industry Service of the Agricultural Rehabilitation Division of the UNRRA China Office should also be mentioned.

The establishment of local small-scale industries on a nationwide basis will probably prove a much more difficult task than the development of large-scale industries, and will therefore demand more in the way of Government assistance and organisation. In such large countries as China or India, in particular, the number of small producing units to be established in towns and villages will be enormous, and this in itself suggests the magnitude of the task involved. Furthermore, peasants and craftsmen lack the technical knowledge required to undertake the modernising of their industrial activities and have a natural tendency to resist social and economic change. The initiative and responsibility for the development of small-scale industries will therefore rest primarily with the central and local Governments. If such industrial development is to be accelerated, it is not sufficient to create a favourable economic environment by such measures as the reduction of land tax and improvements in rural credit institutions; it is also necessary for the Governments to take an active part in starting and organising small-scale industries. The success of these industries will depend in large measure upon the amount and quality of technical and managerial assistance that the Government can provide; in this respect the United Nations, the International Labour Organisation, and other intergovernmental organisations will be able to assist the Governments.

To achieve the best results, the development of small-scale industries must, of course, be closely co-ordinated with other plans for economic development. To take the cheap supply of power for instance : it will make a considerable difference to the production costs of decentralised small-scale industries if

their establishment is accompanied by rural electrification, and this point should be taken into account in framing plans for power development. Such schemes for the utilisation of hydraulic power as the Yangtze Valley project would greatly reduce the cost disadvantages of small-scale industries as compared with large-scale industries. To take another instance: the capital equipment required by small-scale industries differs radically from that used in large-scale industries, and this point will need to be taken into account both in planning the development of capital goods industries and in drawing up plans for imports, in order that the small-scale industries may be sure of an abundant and steady supply of such equipment at a reasonably low cost. It may also be noted that since the tools and implements used by small-scale industries are much simpler than those used by large-scale industries, they can be produced more advantageously at home. This will reduce the amount of foreign exchange needed for financing economic development.

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The possible alternatives are, of course, less clearcut than the foregoing brief discussion might suggest. In allocating materials in short supply, the choice is not between agriculture and industry, or between consumers' goods and capital goods, or between production for home consumption and production for export, or between large-scale and small-scale industries. Marginal considerations are the determining factor, and the real question is whether there should be more or less agriculture, more or less industry, more or less consumers' goods, more or less capital goods, and so on. In some cases, a single industry may produce consumers' goods as well capital goods, or exports as well as goods for home consumption. Again, development in one direction may itself bring about an expansion in other directions; for example, the growth of the modern textile industry may lead to increased home consumption and to an expansion in exports.

An order of priorities will no doubt have to be drawn up in respect of materials in short supply, and this will affect every section of the community in one way or another. It is of the utmost importance, therefore, that a body fully representative

of all sections of the community should determine the order of priorities, with reference to the social objectives it is decided to pursue.

It remains to be noted that no single scheme of priorities can be expected to apply to the widely varying circumstances of the different Asiatic countries. As has been shown in Part I, there are marked differences between them not only in social structure and attitudes and in existing industrial equipment, but also in the basic material and other resources available for future development. There are also important differences in climate, in physical conformation, and in location in relation to existing trade routes and to the various industrial and raw-materials producing regions of the world. Differences in these various respects are bound to influence the order in which industries are developed in different countries and the general structure or pattern of development towards which long-range planning is directed.

CHAPTER VIII

INTERNATIONAL ASPECTS OF ECONOMIC DEVELOPMENT

RELATIVE IMPORTANCE OF FOREIGN AND DOMESTIC FINANCE

It is now widely recognised that economic development in Asiatic countries will be influenced by the extent of foreign capital resources available to them. They have repeatedly stressed the need for foreign loans to finance the purchase of machines and other capital goods; and the few western countries which are in a position to make substantial loans have become increasingly aware of this need. It is noteworthy that both groups of countries are associated in the membership and control of the International Bank for Reconstruction and Development, under the auspices of which a large part of the international lending of the next few years is expected to take place.

The relative importance of foreign and domestic finance in any programme of economic development therefore needs to be examined. As has been noted above, much of the physical formation of capital must necessarily be done at home. Most of the capital needed consists of structures which must be built on the spot with whatever local labour and other resources are available. Building materials, with few exceptions, do not enter international trade; labour for building must also be found at home. This does not mean, however, that a corresponding proportion of the capital formation must necessarily be financed at home. While the main use of foreign capital will, of course, be to finance the purchase of those types of equipment and technical skill which cannot be obtained locally, it will almost certainly be desirable to finance some of the domestic capital formation from abroad, using foreign credits to import consumption goods in order to mitigate the extremely severe strain

that would be imposed by the diversion of domestic resources from the production of consumption goods to the formation of capital.

However, even allowing for these wider uses of foreign loans, it will be found that a large part of the industrialisation programme can and must be financed at home. The possibilities of foreign borrowing are limited, and the repayment of the loans will constitute a charge on the country's balance of payments in the future. Therefore, the amounts to be borrowed from abroad and the uses to which the loans are put should be carefully considered in relation to the country's prospective export capacity.

Quite a large part of capital formation can be financed from domestic resources, particularly if an effort is made to ensure that current savings are made available for the purpose, either through public borrowing or through credit creation. Each country is likely, moreover, to have some resources of its own out of which it can finance oversea purchases. There are, in the East, substantial accumulations of internationally exchangeable assets, such as gold and precious stones, in private hands. Some countries will have a favourable balance of trade which can be applied to the importation of goods needed for industrialisation, while some, notably China, may receive substantial quantities of capital and other goods in the form of reparations from Japan. It is only that part of capital formation which still remains to be financed after these resources have been exhausted that will be dependent on foreign borrowing. Some idea of the relative magnitudes involved can be obtained by a study of the Bombay Plan. Its authors propose as their target figure for capital formation over the next 15 or 20 years the substantial sum of 10,000 crores¹ of rupees (that is, 33,000 million U.S. dollars). They propose to raise this amount in the following ways:

	Rs. crores			
External finance :				
Hoarded wealth	800
Sterling securities	1,000
Trade balance	600
Foreign borrowing	700
Total	2,600

¹ 1 crore = 10 million.

						Rs. crores
Internal finance :						
Savings	..	..	..	..	..	4,000
Created currency	..	..	..	..	..	3,400
Total	..	..	..	..	..	7,400
Grand total	..	..	..	..	..	10,000

This Indian plan is instructive because in some respects India is one of the most favoured countries of the Far Eastern region. It has large potential resources and had made a promising start with industrialisation before the war. Unlike China and other war-devastated countries, it was able to accelerate the rate of this development during the war. Moreover, India accumulated enough foreign assets in the United Kingdom during the war to make it a creditor nation¹; it has proverbial hoards of wealth; and it has a wide range of resources, which are in demand in world markets. India can probably hope to have considerably more foreign exchange available in the near future—both on income and on capital account—than any other country in the region. The authors of the Bombay Plan are not opposed to foreign borrowing as such.² They merely find that as much as 74 per cent. of the plan could be financed out of current domestic savings borrowed either directly or through credit creation. Of the remaining 26 per cent., 6 per cent. would come from a favourable trade balance and 13 per cent. from the liquidation of hoarded wealth and sterling securities. Only 7 per cent. would remain to be raised by foreign borrowing.

In China, a five-year plan of economic development has recently been drawn up by the Central Planning Board of the Supreme National Defence Council. The completion of the

¹ One writer has made calculations which tend to show that India is still a debtor nation; he arrives, however, at the conclusion that the foreign indebtedness of India has been substantially reduced by the accumulation of foreign assets in London and the repatriation of certain types of foreign debt. Cf. B. B. SHENOV: *The Sterling Assets of the Reserve Bank of India* (Bombay and London, Oxford University Press, 1946), in particular, Chapter III, pp. 45 *et seq.* For figures to show that India is a creditor nation, using the official estimates, see Cleona Lewis: *Debtor and Creditor Countries: 1938, 1944* (Washington, D. C., Brookings Institution, 1945).

² "India's credit in foreign capital markets is now very high, and she can therefore borrow substantial amounts of capital if she so wishes. Such capital, if it is not accompanied by political influence or interference of foreign vested interests, should not be unwelcome" (*A Plan for the Economic Development of India*, *op. cit.*, p. 45).

plan will require a total capital outlay of \$21,973 million at the pre-war value, or about U.S.\$6,592 million, and a total labour force of about 5 million workers; 51 per cent. of the capital will be allocated to the purchase of commodities and services at home and 49 per cent. to the purchase of commodities and services abroad. One third of the total capital required is to be appropriated from the National Treasury, one third is to be raised abroad, while the remaining one third is to come from the savings of the people. The percentage allocation of capital and of labour under different heads is as follows.

					Capital	Labour
					%	%
Communications	..	..	..	..	38	59
Industry	..	..	..	..	27	18
Mines	..	..	..	..	11	10
Power	..	..	..	..	10	10
Irrigation	..	..	..	..	9	2
Agriculture	..	..	..	..	5	1
					100	100

Most countries in the region will have rather limited foreign exchange resources at their disposal—particularly where their export industries are little developed, where industrialisation is still in its very early stages, or where there was extensive destruction of productive facilities during the war. Moreover, they are all debtors on international account and their credit standing in the world's capital markets is therefore low. These countries will wish to borrow from abroad relatively large amounts to finance industrialisation. If the full amount required is not forthcoming, their choice will lie between advancing more slowly towards the goals set and making greater sacrifices in current consumption.

The relative importance of foreign capital for development and the ability to obtain it are thus likely to vary considerably as between the different Asiatic countries of the Far Eastern region. But the amount of foreign capital required may be much less than would at first sight appear to be necessary.

In the existing conditions in Asiatic countries, industrial methods using relatively large numbers of workers will as a rule be preferable, where technically possible, to methods using relatively much capital, even though labour-intensive methods may not be technically the most up-to-date. There will, of

course, be cases in which a capital-intensive process is so superior to any labour-intensive method as to make the latter uneconomical even where labour is as plentiful as it is in Asia: such is likely to be the case, for example, in the steel industry. But in many other industries, a real choice between the two alternatives is possible.¹ The reason why the use of labour-intensive methods may be more appropriate in Asiatic countries is that it enables them to exploit more economically the resources in which they have absolute and relative advantages over other countries, and thus puts them in a better position to compete with the capital-intensive methods of the West. Moreover, it has the great advantage of making it possible for them to husband their limited foreign exchange for the most essential purposes.

To recognise the advantages of labour-intensive methods in the East is not to advocate their uneconomic use as a means of creating work, the result of which would merely be to substitute another kind of disguised unemployment for that already existing in agriculture. But there is a real danger of "over-rationalisation", of investing in the newest processes not because they are economically superior to the older processes, but because they are technically more efficient. Engineers, in particular, are apt to find an aesthetic quality, hard to resist, in mechanical techniques. It is an error to suppose that the intricate and complex mechanical equipment which is at present produced only in the more highly industrialised countries is indispensable for economic development. It is true that some machinery of this type will be needed for industrialisation and that it should be imported, but the quantity may be much less than is commonly

¹ It has sometimes been questioned whether it is really possible in the circumstances to substitute labour for capital and vice versa on a large scale and without completely transforming the whole structure of production. In actual fact, however, it would appear that "substitution is a practical possibility in almost any production." Beginners sometimes think that substitution of labour for capital must mean the scrapping of machines and shifting of their functions to hand labour. Better care and maintenance work for equipment, postponing the need for replacement, constitute a clear case of substitution of labour for capital. Increased utilisation of plant capacity with increased employment and output raises the ratio of labour to capital and is another form of substitution." (Fritz MACHLUP: "Marginal Analysis and Empirical Research", in *American Economic Review*, Sept. 1946, p. 581.)

The use of labour-intensive methods is thus not limited to such instances as the use of shovels instead of bulldozers, but may include the more intensive use of existing machinery through, for example, the working of shifts or the adoption of longer working hours in cases where only one shift of workers is employed.

supposed. There is, for example, no reason why tractors should be used on farms where horses or oxen are cheaper. It is by no means clear that there is any economic justification for the use of steamshovels or bulldozers in the interior of China or India. Foreign resources should not be squandered on building up highly technical industries which will leave the country poorer and with more unemployment than before, not disguised but in a quite obvious form. This risk can be minimised by the development of small-scale industries.

The importance of foreign assistance should not, on the other hand, be under-rated. Even comparatively small supplies of special types of machinery and of materials and technical assistance obtained from abroad may be of crucial importance to industrial development, when no supplies of the required kind are available locally. The application of a small amount of foreign credit to finance a particularly vital import may permit a quite disproportionately large advance in the local plan for industrialisation. Foreign credit, if properly used to facilitate local production and overcome local shortages, can contribute greatly to the solution of the problems of poverty and disguised unemployment.

FACTORS AFFECTING THE FLOW OF FOREIGN CAPITAL INTO ASIATIC COUNTRIES

The volume of foreign capital likely to be available is therefore a subject of great importance. Of the many factors which determine the volume of such credit, the following may be mentioned: (a) the lending capacity of the industrially advanced countries; (b) the prospective return on foreign investment in Asiatic countries; and (c) the degree of risk involved in foreign investment in these countries.

Lending Capacity of Industrialised Countries

The capacity of industrially advanced countries to lend abroad varies not only as between the countries concerned, but also as between one period and another, according to variations in internal economic conditions. As a first approximation, it may be stated that the more the resources of an industrially advanced country would otherwise remain idle, the more can it afford

to grant foreign loans; for foreign lending is essentially a net transfer of the use of resources from the lending to the borrowing country. Its lending capacity, in real terms, is therefore closely related to the level of employment and income it can achieve.

The level of income and employment in an industrially advanced country is determined (leaving aside questions of structural adjustment), on the one hand, by the proportion of income that the population wishes to save, and, on the other, by the volume of home investment plus the balance of payment on current account (positive or negative). The larger this latter total and the smaller the savings ratio, the higher the level of employment and income. The magnitude of each of these three variables is determined by complex economic forces. It may be sufficient here to note that in at least some of the industrially advanced countries, notably the United States, the high savings ratio and the limited opportunities for private home investment may make it impossible to maintain full employment and production in the period following the transition from war to peace if special measures are not taken to ensure a high level of investment. It would appear from recent studies of conditions in the United States that in that country, at the level of full employment, the potential volume of savings is likely to exceed considerably the volume of private home investment plus the balance of payments on current account.

In the absence of special measures to provide an outlet for the surplus savings, national income in such countries tends to fall to the lower level at which savings do not exceed an amount commensurate with the volume of home investment plus the balance of payments on current account. A part of the country's resources will remain idle and, to that extent, its capacity to lend abroad will be augmented. In addition, it will in these circumstances derive greater benefits from such lending than it would if its resources were fully employed. Foreign lending, by stimulating exports, tends to raise the income and effective demand of the lending country and thus to induce a secondary expansion of employment and income. It serves, therefore, not only to accelerate capital formation in the underdeveloped borrowing countries, but also to raise the level of employment and prosperity at home.

Foreign lending is, however, only one of several possible

methods to achieve full employment in an industrially advanced country in which resources are likely to remain underemployed. The other methods are (1) to reduce the savings ratio, (2) to stimulate private home investment, and (3) to expand public home investment. Thus even if its lending capacity is large because of the existence of idle resources, the actual amount lent abroad by an industrially advanced country will depend largely upon the particular combination of methods to promote full employment which it chooses to adopt.

The advantages of including foreign lending in any such combination are undeniable. Not only does it contribute to the maintenance of full employment in the lending country, but by speeding up capital formation and hence the improvement of productivity in the underdeveloped countries, it also tends to bring about a much greater expansion in world real income than can be expected from any other method of achieving full employment. Any such expansion in world real income will lead to a corresponding increase in the world demand for exports from the industrially advanced countries, and this increase may be expected, in the long run, to serve as a permanent contribution towards the maintenance of full employment in these countries. Furthermore, the rise in productivity in the underdeveloped countries will lead to a higher degree of international division of labour, thus enabling the industrially advanced countries also to attain a higher level of real income than would otherwise be possible.

In the case of some industrially advanced countries, foreign lending will be necessary even in conditions of full employment because of their invariably favourable balance of payment on current account. The volume of exports and the volume of imports (including all the invisible items) are determined by different economic forces and, therefore, do not always balance each other. Countries whose demand for imports is small relatively to the world demand for their exports are likely to have a constant export surplus, leading to a chronic shortage in the supply of their currencies on the world foreign exchange markets. Such an export surplus cannot last long unless these countries provide the world with additional amounts of their currencies through long-term foreign lending. In the absence of foreign lending or of measures to increase their imports, the rest of the world will be forced to cut down its demand for their

exports. If this decline in exports is not staved off by foreign lending, it will clearly exercise a depressing influence upon the level of employment and income in the surplus countries.

It should, however, be noted that the lending capacity of a highly industrialised country is not limited by the amount of its idle resources, nor—in conditions of full employment—by its export surplus. Even when there are sufficient opportunities for home investment to absorb all savings at the level of full employment, investors may still prefer to invest a part of their funds abroad rather than at home. The extent to which such a diversion of resources from home investment to foreign investment takes place will be determined largely by the relative attractiveness of the two types of investment, that is to say, by the prospective return on capital invested and the degree of risk involved in each case.

However, even though foreign investment is found more attractive than home investment, its extent may be limited by balance-of-payments difficulties resulting from the use to which the loans are put. "The condition of the balance of payments imposes no limit to the dimensions which international investment can assume whenever the lending of money is directly associated with the export of goods of a commensurate value."¹ A typical example is the extension of long-term credit to a borrowing country for financing the purchase of goods and services in the lending country. Other examples are tied loans and, to a smaller extent, direct foreign investments. There are, on the other hand, various types of foreign loans, such as the flotation of securities the proceeds of which may be spent partly in the lending country, partly in the borrowing country, and partly in other countries. The extent to which the exports of the lending country rise as a consequence of loans of this type depends upon: (a) the intensity of foreign demand for the exports of the lending country as compared with those of other countries; and (b) the proportion of the income generated by the loans which is saved in the borrowing country, and in other countries in which parts of the loans are spent. In the event of the induced increase in exports falling short of the full amount of foreign lending, income and employment in the lending country are likely to fall to a lower level than if the funds

¹ ROYAL INSTITUTE OF INTERNATIONAL AFFAIRS: *The Problem of International Investment* (Oxford University Press, 1937), p. 57.

had been invested at home. Moreover, the deterioration in its balance of international payments as a result of overlending will reduce the international liquidity of the lending country. If the lending country has little liquid reserves, this may cause serious exchange difficulties, as can be seen from the experience of British foreign lending during the inter-war period.¹

To sum up, the lending capacity of an industrially advanced country is determined by a variety of factors. These include the amount of its existing idle resources, the presence or absence of a tendency towards chronic export surplus, the types of lending transactions, the intensity of world demand for the exports of the lending country, the propensity to save of the borrowing and other countries, and the international liquidity position of the lending country.

Prospective Returns on Foreign Investment

The inducement to invest abroad, as already indicated, is determined partly by the difference in prospective returns between home investment and foreign investment. There is a strong presumption that the prospective returns on investment in the Asiatic countries should be higher on the average than those on investments in industrially advanced countries. There are several reasons for this. Because of the scarcity of loanable funds, the long-term interest rates prevailing in Asiatic countries are considerably higher than those in industrially advanced countries. This interest differential, though it can be reduced to some extent by improving the banking systems and capital markets of Asiatic countries, is likely to persist for a long time owing to the deficiency in the supply of domestic savings relative to the demand for capital. Moreover, with large potential resources waiting to be exploited, these countries should offer more numerous and better opportunities for new investment than the industrially advanced countries. It should also be remembered that the general level of wages in Asiatic countries is exceedingly low. This level can rise only as labour

¹ For recent theoretical investigations of the problem of foreign lending in terms of modern income analysis, see Lloyd A. METZLER: "The Transfer Problem Reconsidered", in *Journal of Political Economy*, Vol. 50, 1942, pp. 397-414; Fritz MACHLUP: *International Trade and the National Income Multiplier* (Philadelphia, The Blakiston Company, 1943); and the review of this book by Lloyd A. Metzler in *Review of Economic Statistics*, Vol. XXVII, No. 1, Feb. 1945, pp. 39-41.

in general becomes more productive, and it is difficult for wages in any single industry to rise much above the general level. Consequently, industries employing foreign capital, and attaining the same standards of productive efficiency as those in industrially advanced countries, should be able to earn a higher rate of profit than similar industries in countries with high rates of wages. This is particularly true in countries in the early stages of economic development, when there are only a few highly efficient industries. There is also the monetary stimulus to be considered. As industrialisation advances, the level of effective demand rises because of the increase in domestic investment. This produces boom conditions in industries in developing countries, and the profits tend to rise.

For all these reasons it would appear that, as far as the prospective rate of return is concerned, foreign investment should, by and large, be more attractive than home investment to investors in the highly industrialised countries. There is, however, the risk factor to be taken into account, but even apart from that consideration, it should be noted that while the underlying economic conditions point to a higher prospective average rate of return on investments in Asiatic countries, it does not necessarily follow that the actual rate of return on particular investments will invariably be high.

Whether the actual returns are high or low depends in part on the productive efficiency of the undertaking, in question—factory, mine, power station or railway—and in part on the co-ordination of industrial development. Industrial efficiency varies not only with the quantity and quality of the capital equipment, but also with the organisation of the industry, the qualities of the management, and the skills of the workers and technical personnel. The efficiency of any one industry, moreover, depends in considerable measure on the efficiency of allied industries; an outstanding example is the close technical relationship between manufacturing and mining, electrical power and transport. The rate of profit in any particular industry is thus affected by the “external economies” in other industries. The degree to which productivity is effectively increased by the employment of foreign capital in Asiatic countries is therefore an important factor in attracting foreign investment to these countries. It may well be that owing to inadequate co-ordination of industrial development or mismanagement of individual

undertakings, foreign investments in fact yield lower returns than expected. In this event, the future flow of foreign capital would be reduced.

Even if high long-term returns are expected on foreign investment, it is still not at all certain that investors prefer such investment to employing their funds at home. For certain types of development, such as the building of railways or hydraulic power plants, the yields are very low at the beginning and rise only slowly. Such undertakings do not usually appeal to foreign investors unless they are financed by fixed-interest debentures contracted with or guaranteed by Governments. More important still, the initiative of private investors can hardly be relied upon to ensure a continuous and steady flow of foreign capital into the underdeveloped countries over a long period of time. The decisions of private investors as to the use of their funds are at all times affected by short-term changes in internal economic conditions, and particularly conditions on the stock market. Investors are often more interested in immediate gains than in the long-term returns. A stock market boom may drain loanable funds into speculative channels and thus reduce the amounts available for productive investment in underdeveloped countries.

Moreover, foreign lending, if left entirely to the initiative of private investors, may not be directed to the most productive channels, as experience has often shown. The United States foreign lending in the 'twenties provides an instance of the unfortunate consequences of unguided foreign lending by private investors. As Professor Alvin Hansen has observed:

The foreign loans of the 'twenties in large part reflected the speculative temper of the 'twenties. The middlemen's profits in marketing the bonds to unsuspecting and credulous investors were not infrequently the primary purpose of the loans. Time and again the loans were made without reference to their economic validity in terms of the uses to which the funds were to be put. The rate of interest was often exorbitant and there were little or no provisions for amortisation. If the funds were not used for productive purposes the borrower was in no position to make good on the debt, and moreover, the exorbitant interest rate invited default.¹

It will thus be seen that in order to attract foreign capital, the borrowing country must do its best to raise the productive

¹ Alvin H. HANSEN: *America's Role in the World Economy* (New York, W. W. Norton & Company, 1945), p. 158.

efficiency of the undertakings for which such capital is sought. This depends partly upon the management of each individual undertaking concerned and partly upon the co-ordination of industrial activity. Moreover, in order to ensure continuity and stability of foreign lending and to put these resources to the most productive use, the traditional system of foreign lending based on the initiative of private investors needs to be revised or supplemented. A certain amount of international control and management would seem necessary if foreign lending is to yield the best results.

The Risk Factor

Even when the prospective returns on foreign investment are higher than those on home investment, this may not be sufficient inducement for investors to take the greater risks involved in foreign investment. Foreign investors in the industrially advanced countries tend to consider the risks involved in long-term foreign investment incomparably greater than those of home investment. This is the main deterrent to a free and abundant flow of foreign capital into the underdeveloped countries. Hence the raising of productivity is only one of the conditions necessary to attract foreign capital. It is no less necessary to reduce the magnitude of the risk involved in the investment.

There are many reasons for regarding the risks of foreign investment as greater than those of home investment. Investors who are not familiar with the social and business customs, the languages, the cultural traditions, and the political, economic and legal institutions of foreign countries naturally have a feeling of uncertainty about the safety of foreign investment. They are likely to take into account the political conditions in the borrowing countries and the possibilities of the development of an unsympathetic attitude to foreign capital and of resulting discrimination. Another risk peculiar to foreign investment, as shown by the experience of the 'thirties, is the possibility of default owing to difficulties of transfer of money from one country to another.

No attempt will be made here to present a comprehensive survey of the measures taken in different Asiatic countries to encourage the inflow of capital. One such measure may, how-

ever, be cited by way of illustration. With the object of removing the legal restrictions upon foreign participation in joint enterprises in China, the Central Executive Committee of the Kuomintang Party adopted a resolution in September 1943, which reads in part as follows:

To show a spirit of close co-operation with China's friendly powers, all restrictions applying to Chinese-foreign joint enterprises shall be revised. Hereafter no fixed restriction shall be placed on the ratio of foreign capital investments in joint enterprises. In the organisation of Chinese-foreign enterprises, except for the chairman of the board of directors, the general manager need not necessarily be a Chinese. The terms and conditions with respect to joint enterprises shall be negotiated by the parties concerned and shall become effective upon the approval of the Chinese Government.

It may be of interest in this connection to recall the views expressed by the Special Joint Committee on Private Foreign Investment of the League of Nations as to the essential conditions necessary to attract foreign investment. The Committee stated in a report published in 1946 that:

A country's capacity to attract foreign capital in adequate quantity on satisfactory terms and to meet the external obligations resulting from capital imports, depends mainly on the following:

- (a) That natural conditions and resources offer remunerative possibilities for economic activity;
- (b) That political, social, economic, fiscal and administrative institutions and conditions permit the secure and remunerative conduct of business;
- (c) That equality of opportunity and fair competition exist in individual and corporate business;
- (d) That economic and social progress is not obstructed by any form of vested interests acting from within the country or from abroad;
- (e) That foreign capital and skill are allowed to enter and are granted fair treatment;
- (f) That domestic enterprise, capital and labour are able and willing to co-operate with foreign enterprise and to use foreign capital and skill;
- (g) That the external trade of the country develops a foreign surplus adequate to cover dividends, interest and capital redemption accruing to foreign investors;
- (h) That the fiscal and monetary policy of the country is such that the sums accruing to foreign investors can be freely remitted, without being subject to any transfer, remittance or foreign exchange tax, and that the value of their build-ings is not exposed to depreciation;

- (v) That in general the treatment of foreigners is such as to promote relations of mutual respect and understanding.¹

The Committee also observed:

Whether private capital is or is not likely to go to any particular country will to a large extent depend on the conditions in which its nationals can carry on business and engage in capital venture. Business activity requires above all that the general internal conditions of the country offer adequate protection to the fundamental personal and property rights of the individual and regulate, without impeding, business in a manner that provides equality of opportunity and the possibility of earning a profit through private initiative. This implies constitutional and stable government, honest and efficient administration, the rule of law, speedy justice accessible to all, and equitable taxation. In addition to the responsibilities which rest with Governments, it is also important that there should be responsible behaviour among the citizens in public and private affairs, which may be promoted by general education and better living conditions.²

The Committee recommended that "all countries should accord to foreigners equality of treatment with nationals, in business and tax matters".

Even if all practicable steps are taken by underdeveloped countries to encourage the inflow of private foreign capital, there appears to be little prospect in the near future of such action alone proving sufficient to meet their needs. The gap may be filled in part by intergovernmental loans and in part by loans from the International Bank for Reconstruction and Development. There is good reason to believe that it could be substantially narrowed by providing private investors with a measure of insurance against the risk of loss.

The provision of such insurance is in effect the main function which the International Bank is designed to perform. As has been aptly observed, what the Bank sets out to do is to pool the risks involved in international lending and to equalise the risk premium. This is to be done by joint international guarantees and a 1-1½ per cent. guarantee commission or "insurance premium". The Bank thus provides a novel and promising method of tackling the vexing problem of the risks of foreign lending, and should this method prove successful it would remove one

¹ LEAGUE OF NATIONS, ECONOMIC AND FINANCIAL ORGANISATION: *Conditions of Private Foreign Investment. Report by the Special Joint Committee* (Princeton, 1946), p. 13.

² *Ibid.*, p. 14.

of the most serious obstacles to rapid economic development in Asia.

PROBLEMS OF REPAYMENT

It is of the essence of a loan that it must be repaid. The prospective ability of a country to make repayment therefore sets an upper limit to the extent to which it can prudently resort to borrowing for the purpose of financing economic development.

By adding to the productive capacity of a country, a development loan, wisely utilised, creates the product out of which repayment can be made. In the case of an international loan, however, this additional product must not merely be created: it must be transferred to another country. The necessity for this transfer raises certain special problems, the magnitude of which will depend in large measure on the size of the loan, its duration, and the rate of interest. The larger the amount, the higher the rate of interest, and the shorter the agreed period for repayment, the more difficult will be the transfer of the loan repayments, and the greater will be the adjustments required by both lender and borrower if defaults are to be avoided.

The Transfer Problem

Foreign loans are sought in order to permit additional purchases abroad. The loan itself can be transferred only if the borrowing country develops an import surplus which is covered by the loan. Conversely, the lending country has to develop an export surplus. When interest and amortisation payments exceed current borrowing, the balance-of-payment surpluses have to be reversed. The borrowing (and now repaying) country has to earn sufficient foreign exchange to pay for interest and amortisation, in addition to current imports. It can earn the necessary foreign exchange only by developing an export surplus. The lending country, on the other hand, can expect to be repaid only if it enables the borrowing country to earn sufficient foreign exchange, that is, if it develops an import surplus.¹

¹ This does not mean that during the period when repayment is taking place the lending country must import more from the borrowing country than it exports to that country: it is sufficient that the lending country's total imports from all sources should exceed by the necessary amount its total exports. The necessary transfers may, and normally will, be effected through multilateral trade.

It will thus be seen that the borrowing countries must use their loans in such a manner as to enable them to develop an export surplus when the time for repayment comes, and that the lending countries must then be willing to adjust their economies to permit import surpluses. Generally, this adjustment will only be possible if the countries which receive payments attempt to maintain high and expanding incomes so as to facilitate a high level of demand for goods in general, including imports, and if the world in general reverts at least in part to the freer trade policy which, by encouraging specialisation, was so largely instrumental in the general raising of the standards of living of the western world in the 19th and early 20th centuries.

The Use of the Loans

The uses to which the loans are put have an important bearing on the capacity of the borrowing countries to build up the export surplus essential to the servicing of the loans. It is not necessary that each particular loan should be used in such a manner as to lead directly to increased exports. Nor does it follow that, if a particular investment is likely to yield a profit in the currency of the country in which it is to be made, sufficient foreign exchange will automatically be available to transfer that profit in the currency of the creditor nation. If there are no profits, the problem of transferring them does not arise.¹ But if there are profits, the extent to which foreign exchange is available to the debtor country will depend largely on the world demand for its products.

In general, therefore, the import and export potentialities of countries are more important than the profitability of any particular investment. It is essential that the loans should increase the export capacity of the borrowing country, though not necessarily, however, the export of particular types of goods in demand in the creditor country. Such export would ob-

¹ The argument set out above refers to loans made to private businesses. But the problem is not essentially different in the case of loans to Governments. In this case, it is necessary to take into account the expected tax returns instead of the profitability of an investment. Even if the Government is able to meet the interest charges on the loans by domestic taxation, the problem of converting the revenue into foreign currency still remains, and it cannot be solved merely by the ordinary calculations of sound business.

viciously be one possible solution of the transfer problem, but it would only be acceptable to the borrowing country if the development of the particular industry or industries did not lead to an excessive dependence of the borrowing on the lending country.¹

While foreign loans should be used to raise the productive capacity of borrowing countries, it is important to note that almost any use, short of expenditure on luxuries, may contribute to this end. The term "productive" in this context must not be interpreted too rigorously. There is no sharp line between the productive and the unproductive use of a foreign loan. Expenditure on sanitation and public health facilities, by improving the health of the people, might raise the productive capacity of a country. A foreign loan used to train workers, or to build up a system of vocational schools, would certainly raise the productive capacity of a country suffering from acute shortages of skilled labour. Improved facilities for general education might also be expected ultimately to raise export capacity. The use of foreign exchange for such purposes is therefore justified.

Nor is it essential that the imports financed by foreign borrowing should consist only of goods that cannot be produced by the borrowing country. The purpose of a foreign loan is to add to the real resources of a country to enable it to consume and/or invest more than it could do if only domestic resources were available. The loans can be used to pay for food imports, and resources previously employed to produce food can then be diverted to other purposes—the construction of a road, an irrigation scheme or a power station. As long as the export capacity² of the borrowing country is developed, it is of no particular importance whether foreign or domestic resources are used for this purpose. What is important is the cumulative effect of the use made of the loan on the future balance-of-payments position of the borrowing country.³

¹ Cf. HIRSCHMAN : *National Power and the Structure of Foreign Trade* (California University Press, 1945), for examples of ways in which the excessive dependence of one country on another can be, and has in fact been, abused for political purposes.

² The same result is also achieved if import needs are reduced.

³ Cf. J. J. POLAK : "Balance of Payments Problems of Foreign Countries Reconstructing with the Help of Foreign Loans", in *Quarterly Journal of Economics* (Harvard University Press), Feb. 1943.

The Amount of Foreign Borrowing

The relative levels of interest rates at home and abroad give no reliable guidance as to the amounts which an underdeveloped country can advantageously borrow abroad. It is of course natural and proper that a borrowing country should seek to raise its loans at the lowest available rate of interest; but direct comparisons between interest rates in countries in different stages of economic development are apt to be misleading.

The institutional framework in which interest rates are determined in Asiatic countries is in fact markedly different from that in western Europe and North America. No doubt, the higher interest rates in these countries reflect a greater scarcity of capital. But this is not the whole explanation of the differential. The higher interest rates are also the result of the undeveloped monetary organisation, which neither stimulates saving nor facilitates the productive use of existing savings. By improving and developing financial institutions, these countries should be able to tap a considerably greater volume of savings than has hitherto seemed possible—savings which in the past have remained sterile for lack of institutions to mobilise them and direct them into productive investment; and it may then be possible to bring about a marked reduction in domestic interest rates.

In addition to mobilising all available domestic savings, a country in the early stages of development may resort to credit expansion in order to finance development plans. The extent to which this will be desirable will depend mainly on the amount, the character, and the geographical distribution or mobility of the unemployed or virtually unemployed resources which are available for productive use. If these resources are considerable and are suited to the needs of the proposed development, credit expansion should prove a convenient device for bringing them into use. Once high levels of employment and production are attained, however, further credit creation, though it might succeed in diverting existing resources from the production of consumers' goods to that of capital goods, would lead to an inflationary rise in prices. The burden of capital formation would then fall largely on those classes of the population who could least afford to bear it. Inasmuch as in Asiatic countries these classes have little or no margin over the bare essentials

for subsistence, any credit creation beyond what is justified by the existence of unemployed resources must be regarded as undesirable.

While foreign borrowing is essential to the success of really adequate development plans in Asiatic countries, the total amount which a country can safely borrow is, however, limited by the expected net improvement that the loans will bring about in the balance of payments available for servicing the debt. In order to determine how large a foreign loan could be supported by the amount of foreign exchange expected to be available, the capital value, at the expected rates of interest, of the expected improvement in the balance of payments should be reckoned, due allowance being made for amortisation. Because of the many uncertain factors involved in any estimates of the future balance of payments, such estimates would, of course, need to be used with the greatest caution. Where the loans are made to, or are guaranteed by, Governments, the ability of those Governments to raise revenue must also be taken into account.

While it is to be hoped that, as the world recovers from the effects of the war, the supply of capital available for international lending will steadily increase, it seems probable that during the years immediately ahead the amounts available will fall far short of the amount that countries in process of reconstruction or development may wish to borrow. The traditional reaction in such circumstances would be to raise interest rates to the level required to discourage a sufficient proportion of borrowers. Many of the loans which will be made in the future are, however, likely to be made through intergovernmental, governmental or semi-governmental agencies, or with the guarantee of such agencies. Some variations in interest rates may be expected to continue, but it would seem clearly undesirable that the allocation of the limited sums available among the various potential borrowers should be determined solely or even mainly by the level of interest rates. High interest rates have often been a discouragement to conservative borrowers, but they have seldom daunted those reckless borrowers who remain unaffected by the prospects of bankruptcy. As the size of the loans to be made seems likely to be determined by semi-political decisions reached by agreement between the suppliers of capital and the borrowers, there would evidently be advantage

ages in working out some kind of international priority list of development and reconstruction plans. It is of interest to note in this connection that one of the declared objectives of the International Bank for Reconstruction and Development is "to arrange the loans made or guaranteed by it in relation to international loans through other channels so that the more useful and urgent projects, large and small alike, will be dealt with first".¹

COMMERCIAL POLICY

It is often assumed that protective tariffs or subsidies for new industries will be needed on an extensive scale if underdeveloped countries are to be industrialised quickly, or indeed, if they are ever to attain a reasonable standard of living at all. This assumption, though at first sight plausible, overlooks many of the realities of the situation.

It overlooks the fact that many industries are by their nature sheltered against foreign competition. For many products, particularly those of small value and large bulk, transport costs constitute an effective protection. Most building materials are in this class. A number of other industries must depend on local markets: fresh foods and newspapers are obvious examples. Again, virtually the whole range of tertiary industries, such as commerce and transport, personal and domestic services, public administration and professional services, are essentially dependent on domestic markets. A great part of the production required in connection with plans for industrialisation and modernisation is therefore completely sheltered from foreign competition.

Such competition may, however, be a problem for several other industries, and the case for tariff or other protection will then be put forward on a variety of grounds. The infant industry argument is likely to be most popular—the argument that new industries need protection in the early stages of their development to prevent their being forced out of existence by overseas competition. But the only justification for according protection on this ground is that the industries will in fact get themselves established at a competitive level of efficiency within

¹ Articles of Agreement of the International Bank for Reconstruction and Development, Article I, paragraph (iv).

a period of time that is reasonable in relation to the cost of the protection—and that the protection will then be withdrawn. To the extent that the fulfilment of these conditions can reasonably be assumed, the protection of infant industries may legitimately be undertaken. As the Preparatory Committee of the United Nations Conference on Trade and Employment has observed:

As a general rule newly established industries depend, initially at least, upon domestic markets for the sale of their products. The Preparatory Committee is of the opinion, therefore, that, where necessary, members desiring to promote industrial development should have or should be afforded reasonable freedom to employ protective measures so that an adequate portion of their local markets may be assured to the commodities concerned. However, since an unwise use of protective measures by any country for the purpose of promoting industrial development places an undue burden on the economy of that country and imposes unwarranted restrictions on international trade, it is desirable that countries promoting development should not make immoderate use of such protective measures.¹

Another ground on which protection is often sought is the desire of a country for greater diversification of its industries as a means of attaining greater stability of income and production and in order to provide a wider range of employment opportunities to the workers. This argument is on a par with the argument that certain industries should be protected because they are essential for defence and the maintenance of national independence. These arguments frankly concede that protection in these instances involves a permanent cost to the community, but contend that this cost should be borne in order to obtain the resulting advantages.

Finally, if development plans are likely to cause substantial unemployment, as, for example, by the displacement of handicraft workers, protection will probably be urged on another ground—that it is necessary in order to give employment at home. Again it will be conceded that a cost is involved to the community, but it will be argued that the alternative cost of unemployment would be greater. Protection in this case is essentially a "beggar-my-neighbour" policy, a policy of exporting unemployment; and other countries may be expected to

¹ *Report of the First Session of the Preparatory Committee of the United Nations Conference on Trade and Employment* (London, Oct. 1946), Chapter II, section H, p. 8.

retaliate. The interests of all concerned would be better served by specific measures—such as the retraining of displaced workers for new types of employment, or the provision of assistance towards the establishment of new industries, designed to provide constructive solutions to the special problems of an economy in process of development.

As a general rule, it must be presumed that any interference with international specialisation and division of labour will interfere with the raising of living standards. It must be clearly demonstrated that a particular import restriction will fit into the general plan for the development of a country before the desirability of imposing the restriction can be conceded. If goods can be imported more cheaply than they can be produced at home, there is a strong case for importing them.

There is a special reason why this general presumption should apply with particular force to Asiatic countries. Such capital goods as they import—machines, machine tools, and so forth—will come mainly from the more highly industrialised countries. To impose tariffs on these goods and thereby raise their cost would obviously handicap the process of development. Raw materials must also be imported as cheaply as possible if industry is to expand. If a tariff is to be applied, therefore, it must operate mainly against the imports of consumers' goods. But in the case of consumers' goods, the imports of Asiatic countries will be drawn in large measure from one another. The types of goods favoured by the bulk of consumers in these countries will generally differ, because of lower levels of income and differences in tastes, from those produced for consumers in the economically more developed countries; and many of the former types are likely to be of the kind which can be produced efficiently by Asiatic labour. Because of the low cost of this labour and because of the advantages of producing for local markets, Asiatic countries are likely to enjoy a comparative advantage in the production of a large proportion of the consumers' goods demanded by the local population. Before the war, very nearly half the total trade of Asia (excluding the U.S.S.R.) was intra-regional. The proportion of such intra-regional trade in consumers' goods alone must have been even higher; and there is every reason to expect that it will remain high. Import restrictions in any Asiatic country are therefore

likely to operate mostly against other Asiatic countries. It is obvious that, where all the countries of a region are faced with very similar problems, the welfare of each is intimately connected with that of the region as a whole. No country can reasonably hope to gain if the whole region does not do so. Protection in any one country is likely to hurt the other countries of the same region, and protection throughout the region is almost certain to hurt everyone concerned to the extent to which it is effective. It would therefore be to the advantage of all the Asiatic countries in the Far Eastern region if each could encourage the freest possible development of trade.

In those cases in which, after due consideration is given to both costs and benefits, a measure of protection is reckoned to be worth while, it need not, of course, take the form of a tariff on imports. A system of subsidies for domestic production may often be found preferable. The cost of a subsidy, unlike that of a tariff, can be calculated with certainty and will generally be a matter of public knowledge—a not inconsiderable advantage when it is remembered that, whatever form protection may take, it is the public which must bear the cost. Since the public knows the cost of a subsidy and must meet that cost through taxes, it is likely to insist on such adjustments of the amount as may be appropriate once the industry in question has reached the stage at which it can meet foreign competition, or has demonstrated its inability to do so. Moreover, the cost of a subsidy can be allocated by legislation according to the ability of various sections of the community to pay. Finally, the scope of a subsidy can be limited with much greater precision and certainty than that of a tariff to the particular industry which it is designed to protect. On the other hand, it should be remembered that subsidies are more difficult to administer than tariffs. For the provision of subsidies, a Government needs full and accurate statistics regarding the industry concerned, particularly on the cost differentials of various individual undertakings, as well as an elaborate and efficient administrative machinery to carry out its policy. The form of selective protection is therefore likely to vary from one country to another depending on the existing conditions.

The problem of protection, however, is not solely, and perhaps not even mainly, a problem of tariffs or subsidies. Countries actively engaged in economic development are likely to find

that their demand for foreign exchange exceeds the supply, and will thus be obliged to adopt quantitative restrictions on imports. Such restrictions afford a degree of protection to local industries against foreign competition which is far more effective than any normal tariff.

The extent to which a country's demand for foreign exchange will exceed the supply depends on a number of factors, the most important of which are the scope of its development plans, the volume of its exports, and the amounts of foreign loans available. The more restricted the plan for development, the less will be the demand for foreign exchange; and the greater the volume of exports and the loans raised abroad, the greater will be the supply. As the supply of foreign exchange will almost certainly be smaller than the demand, the borrowing country must make sure that this supply is not dissipated in the purchase of non-essential goods. Development will raise the level of money incomes within the country; and this is bound to increase the demand for foreign goods in general, luxuries as well as essentials, quite apart from the specific demand for capital goods for development purposes. As the Preparatory Commission of the United Nations Conference on Trade and Employment has observed: "A country embarking on a programme of development involving substantial imports of capital goods may be faced with the possibility of balance-of-payments difficulties." In the Commission's view,

..if at any time a country anticipates that such difficulties are imminent, it should be permitted to impose qualitative regulation of its imports so that the appropriate balance may be kept between its imports of capital and consumer goods. Naturally such a regulation of imports will only remain necessary while the prospect of balance-of-payments difficulties remains...

It was thought that countries should undertake to observe certain principles in the use of such import restrictions, and that, since the fundamental objective was to safeguard a country's external financial position, these principles should be based upon movements in the country's monetary reserves. Import restriction, it was suggested, should only be newly imposed or intensified in so far as was necessary to stop or to forestall the imminent threat of a serious decline in monetary reserves or, in the case of a Member with very low monetary reserves, to achieve a reasonable rate of increase in its reserves... It was generally agreed that a Member imposing restrictions on balance-of-payments grounds should be permitted to select imports for restriction in such a way as to promote its domestic employment, re-

construction, development or social policies, in accordance with its own judgment as to the essentiality of the products concerned.

The difficulties connected with the question of the balance of payments do not, however, end with the restriction of imports. Such foreign exchange as is available will presumably be allocated primarily for the purchase of capital goods, essential consumers' goods, and urgently needed technical assistance. The import of many types of consumers' goods will have to be restricted. Domestic industries producing such goods will consequently be protected against foreign competition and will tend to expand.

Two dangers are inherent in this situation. The first is that domestic resources which might have been used for development may be drawn into the production of luxuries which can no longer be imported. Such a diversion of resources would constitute just as serious a handicap to the progress of development as would the use of scarce foreign exchange for the purchase of non-essentials. The second danger is that even in industries producing essential goods there may be a waste of resources, due to the protection afforded to inefficiency by the restrictions on imports. Any regulation of imports will therefore necessitate concerted efforts to improve industrial efficiency and the productivity of labour. There are a number of possible approaches to this problem which might usefully be considered. One is the appointment of "working parties", as in the United Kingdom, to investigate conditions in particular industries with a view to making specific proposals for improving their efficiency. Another is the adjustment of taxes and subsidies in such a way as to stimulate technological progress. Still another is the establishment of vocational schools and the provision of opportunities for technical personnel to study abroad. In certain cases the erection of pilot plants or the establishment of model factories may speed up the improvement of efficiency. In respect of a wide range of problems, Governments may themselves be able either to provide technical assistance and advice or to obtain it through the United Nations and such specialised agencies as the International Bank for Reconstruction and Development, the Food and Agriculture Organisation, and the International Labour Organisation.

At all times it will be to the advantage of every country engaged in intensive economic development, as well as of the rest

of the world, to maintain trade at the highest possible level. Such restrictions as may prove unavoidable will do least harm if they are devised to interfere as little as possible with that international division of labour which the diversity of national resources and climate would render most productive. The gains from economic development could easily be dissipated if every country attempted to be self-sufficient in every line of production. If these gains are to be reaped to the maximum extent, the countries concerned need to take account, in planning their development, of the resources and plans of their neighbours, so as to avoid wasteful duplication and promote complementary development. Here is an opportunity for international consultation and co-operation of a most fruitful kind; and the necessary machinery for it is available in the various organs of the United Nations: the Economic and Social Council, the specialised agencies, and the proposed International Trade Organisation.

CHAPTER IX

SUMMARY AND CONCLUSIONS

Poverty is a common characteristic of Asiatic countries. The wealth of a country is determined by its productivity, which in turn depends on the extent of its land and material resources, its capital equipment, its population and the skill and other qualities of the people, their social attitudes and system of values, and the existing organisation and technique of production. Deficiencies in one or more of these factors will not of themselves make a country poor, for productivity and standards of living can be raised, within limits, by improvements in other factors.

In many of the Asiatic countries of the Far Eastern region, population is large in relation to natural resources. Similar conditions, have not, however, prevented such countries as Switzerland from attaining a high standard of living. The ultimate cause of a country's poverty lies in the failure to apply increasingly efficient techniques of production to the available resources. Adequate quantities of food and raw materials could be produced by fewer men if more efficient methods of production in agriculture and other primary industries were adopted. The development of efficient secondary and tertiary industries would offer productive employment to men so released from rural occupations and would substantially reduce the pressure on the land. As has been pointed out previously, at present such pressure is excessive throughout South and East Asia, where 70 to 80 per cent. of the population depends on agriculture.

Capital equipment is scarce in all Asiatic countries of the Far Eastern region, but this alone should be no deterrent to a revolution in methods of production by industrialisation and the improvement of agricultural productivity. Capital can be formed with domestic resources, as was done in Europe during the industrial revolution. Despite current low standards of

living and the difficulty of moving resources out of consumers' goods industries into capital goods industries without further depressing those standards, Asiatic countries have resources, at present engaged in agriculture and in personal services or unemployed, which can be diverted to capital construction without seriously affecting the output of consumption goods. Relatively simple improvements in agricultural technique, particularly those in the organisation of production which require only a minimum of capital equipment, should result in the release of many workers from agriculture. A change in consumers' preferences leading to a demand for more goods and assets and fewer personal services—a change which usually accompanies a widespread demand for industrialisation—would also release a substantial number of workers from their present occupations. As larger supplies of capital equipment produced locally become available, still more workers could be released from their present occupations and employed in capital goods industries and in secondary and tertiary consumers' goods industries.

Foreign borrowing would make for more rapid capital formation than would be possible by relying exclusively on domestic resources. The amount that can be borrowed from abroad, although inevitably small in relation to the total needs of development in Asiatic countries, could be of substantial assistance in facilitating industrial development by producing, or increasing the supply of, indispensable goods or equipment.

A shortage of the necessary supplies of skilled labour and of managerial and directional staffs is likely to limit development far more severely than the scarcity of resources for the production of capital goods. Here again the services of skilled technicians and managers from abroad would be of great assistance. For the most part, however, development depends on the ability and willingness of the peoples of Asiatic countries to acquire the necessary skills and qualifications themselves.

The outstanding obstacle to the success of a programme aimed at increasing standards of living in Asiatic countries is the probability that while productivity would increase only slowly, population would increase so rapidly as to prevent any improvement in average standards of living. One of the first effects of improved industrial organisation and of the better nutrition, housing, clothing, and public health services that it would bring

would be a reduction in death rates. This would involve a substantial increase in rates of population growth, which could be checked only by the slower acting forces tending to reduce birth rates, such as urbanisation and the emancipation of women. As compared with Europe at the start of the industrial revolution, the Asiatic countries are at a disadvantage in regard to rapid economic development, because of the much higher density of their population and the possibility that the forces which have tended to reduce the growth of population elsewhere will take longer to make themselves felt.

In order to catch up with and outstrip the increase in population and to accelerate the working of forces tending to reduce the rate of its growth, economic development in Asiatic countries would have to be as rapid and as extensive as possible. These countries have, however, the advantage that they can draw upon the experience, skills and techniques of the industrially more advanced countries and can import a part of the capital required. Besides relying on private initiative, they could also resort to the planning and co-ordination of production by the public authorities.

The rate at which industrialisation can proceed depends, however, in the end on the peoples of Asia. It is not purely a question of skill, literacy, health, economic and social institutions, and so forth. These can be developed—and quickly—on one condition, that the attitude of the people is sympathetic to such development. This issue of social and cultural attitudes is fundamental to the question of the rate at which it will be possible to raise living standards. These attitudes will determine ultimately the rate at which production increases and the rate at which population increases.

Almost as important as the social and cultural attitudes of the people is the question of mobility, which depends in part on such attitudes. Workers must be prepared to move from place to place and from job to job in search of the most productive employment. To increase the mobility of resources, appropriate institutions need to be established. Facilities must be made available for training workers. Railways and other communications must be developed to permit the movement of workers, of raw materials, and of finished products. An improved banking and credit system is necessary to canalise savings and for financial development generally.

No matter to what extent industries are developed, Asiatic countries will continue to be chiefly agricultural. The improvement of agricultural methods must therefore have a high priority in their development plans. The following suggestions may be made in this connection:

(a) Settlement of cultivable but as yet uncultivated land. All the countries concerned possess such land to a varying extent.

(b) Enlargement of the size of farms. This could be done by consolidation or by organisation on co-operative lines.

(c) Introduction of better farming methods, better seeds, fertilisers, irrigation, pest control, machinery, etc.

(d) Reorganisation of agricultural economic institutions, with special attention being given to the problems of rural indebtedness, agricultural credit, and farm tenancy.

The main issues in connection with industrialisation regarding which it would be necessary to reach definite conclusions are the following:

(a) How far should industrialisation be carried?

(b) What kind of industries are wanted?

(c) In what order should industries be established if they cannot be established simultaneously?

(d) Where should the industries be located?

(e) How fast should industrialisation proceed?

(f) How should the plan for industrialisation be controlled?

In order to raise the standard of living in Asiatic countries as rapidly as possible, a high priority should, it is suggested, be given to the following types of industries:

(a) Those capital goods industries which will raise agricultural efficiency most rapidly: fertilisers, agricultural implements, certain construction materials;

(b) At least the essential minimum network of communications and power facilities;

(c) Export industries to pay for special imports, such as of certain machine tools, which the countries of South and East Asia either cannot produce or can only produce at too high a cost;

(d) Small-scale industries, particularly in rural communities.

The extent and rate of industrial development would depend on the resources which could be spared from industries producing consumers' goods and on foreign borrowing. In particular, the output of consumers' goods industries should at first be kept relatively low in order to permit as rapid a development of capital formation as possible. However, the output of consumers' goods industries should expand fairly quickly with the development of new industries. Consumers' goods industries could also be expanded with resources which are not suitable for the development plans. In any case, the alternatives would not be exclusive; some consumers' goods industries, like textiles, are also export industries. Even if the greater part of the available supply of skilled labour were allocated to industrial development, there would still be sufficient supplies of less skilled types of labour to increase production for the domestic market. Of course, considerable variations between different countries must be expected, determined by their respective resources, climatic conditions, and the extent of industrial development. Any scheme for improving the productivity of the population in any country would need to make provision for urgently needed facilities for health and education.

In the countries of South and East Asia, much of the capital equipment needed for industrial development consists of buildings, roads, etc., in the construction of which much more labour is required than of the other factors of production, so that use could be made of the abundant manpower at present uneconomically employed in agriculture and services. The use of methods involving a relatively large volume of employment, even if these methods are technically not the most up-to-date, would be the most economical.

Nevertheless, the importance of foreign borrowing should by no means be overlooked. It enables a country to make use of foreign resources, and to attain a higher standard of living and make more rapid progress in capital formation than would otherwise be possible. It is therefore to be hoped that substantial amounts of foreign capital will be available to Asiatic countries for development purposes; and it is in their interest to co-operate in the adoption of measures designed to encourage the inflow and ensure the most effective use of such capital.

Foreign borrowing raises a number of financial problems. Loans, unlike gifts, must be repaid. It would ultimately be

necessary for the repaying country to develop an export surplus and for the receiving country to develop an import surplus to the extent of the transfer. There would be no need for these surpluses in the trade between the two particular countries concerned, but they must appear in the over-all balances on current account. The development of these surpluses in the right places would be facilitated if the receiving countries could attain and maintain high levels of employment and income.

The loans should be used in such a way that the export capacity of the borrowing country is enhanced. It would not be necessary to require them to be used to develop specific export industries. It would be important, however, to make some estimate of the volume of the foreign exchange that the borrowing countries could set apart for the service of the foreign debt. This estimate would determine the international lending and borrowing programme which could safely be undertaken. It is probable that the loans would, on the whole, be used mainly to finance imports of capital goods and of urgently needed technical assistance, and in part to finance imports of the most essential consumers' goods.

The problems of commercial policy, and of tariff protection in particular, are closely linked with the problems of foreign borrowing. Protection against imports of most capital goods or of raw materials would slow down rather than assist the process of industrialisation. Intra-regional trade in consumers' goods plays a large role in the foreign trade of Asiatic countries, and the protection of consumers' goods industries in any one of them would therefore in many cases work to the detriment of the others. In general, measures for protection should be carefully fitted into any national development scheme, and should be limited specifically to lines of production in which there is a good prospect of achieving in a reasonable time a level of output and a degree of efficiency which would enable protection to be dispensed with.

Plans for development would, however, raise balance-of-payments difficulties, which might be most effectively handled by import controls. Such import controls have definite protectionist effects which are apt to interfere with the speedy development of the countries concerned. It is important, therefore, that the general criterion for the imposition of import restrictions should be the state of international monet-

ary reserves ; and that the criterion for any specific restrictions should be the need for the imports in question in relation to the development plan. Countries which need to safeguard the balance of payments would have to prevent inefficient industries from growing up behind the protection of the import restrictions, because otherwise development would be hampered as effectively as if the available foreign exchange had been squandered. Taxation would be one way of offsetting such protection. Safeguards against the effects of protection could be provided even in the absence of machinery for the centralised planning of industrial development. Finally, the importance of co-ordinating the development planning in the different countries of the region should be emphasised. No measure could benefit a country which would hurt its neighbours. The best kind of planning, it has been said, is that in which free trade is taken as a model.

There are at present several international organisations which can assist in providing the personnel and capital required to enable the Asiatic countries of the Far Eastern region to increase their welfare to the benefit of themselves and the world. These organisations include the International Bank for Reconstruction and Development, which may provide some of the urgently needed capital at reasonable rates of interest ; the International Monetary Fund, designed to create a working system of international payments ; the various other specialised agencies of the United Nations, such as the Food and Agriculture Organisation, the World Health Organisation, and the International Labour Organisation, which can provide specialised technical assistance ; and the various organs of the United Nations Economic and Social Council which are concerned with economic development, including in particular, the recently established Economic Commission for Asia and the Far East.

This Commission is to initiate and participate in measures for facilitating concerted action for economic reconstruction and the raising of the level of economic activity in Asia and the Far East, and for maintaining and strengthening the economic relations of these areas both among themselves and with other countries of the world ; to make or sponsor such investigations and studies of economic and technological problems and developments within territories of Asia and the Far East as the Commission deems appropriate ; and to undertake or sponsor

the collection, evaluation, and dissemination of such economic, technological, and statistical information as the Commission deems appropriate.

It may be added that the Asian Relations Conference, which was convened by the Indian Council of World Affairs and met in New Delhi in March-April 1947, adopted a report on the transition from a colonial to a national economy. The main characteristics of a colonial economy, as stated in the report, are as follows :

(1) Lack of balance in economic development, shown chiefly by a preponderance of primary production;

(2) Existence of plantations owned or controlled largely by outsiders or foreigners;

(3) Exploitation of mineral resources largely by outside or foreign undertakings, without being used as a basis of industrial development;

(4) Export trade chiefly in a small number of primary products;

(5) A favourable visible balance of trade, mainly as a result of the investment of outside or foreign capital and of dependence on outside or foreign banking, shipping, insurance, etc.;

(6) Survival of artisan and handicraft industries on a large scale in a stagnant condition;

(7) Restriction of manufacturing industry to limited sectors of the local economy and its control in large measure by outsiders or foreigners;

(8) General lack of integration in economic development, as reflected in the stratification of economic activities and, in many instances, in the existence of plural societies.

It was agreed that the aim in each country should be the attainment of a balanced economy, and the report urged the importance of national policies being guided by broad-based social objectives, largely concerned with the raising of the general standard of living. The policies to be pursued in the different countries for the attainment of these objectives, as specified in the report, are as follows :

(1) Diversification and modernisation of agricultural production;

(2) Improvement in the technique and organisation of handicraft industries;

(3) Development of co-operative organisations, especially in relation to agriculture, small-scale industry, and internal trade;

(4) Development of manufacturing industry with special reference to internal resources and possibilities;

(5) Development of indigenous credit organisations serving the needs of commerce, industry, and agriculture, and development of indigenous insurance, shipping, and foreign trade organisations;

(6) Promotion of social security by such measures as the stabilisation of prices, minimum wage legislation, the establishment and extension of State social services, and social insurance.

Among the difficulties that might be encountered in implementing this programme, the report mentioned an increase in small subsistence farming and a reduction in the surplus of commercial crops for export or industrial use, as a result of the breaking up of large landed estates and plantations; the addition to the burden on the consumer from State action to promote manufacturing industry; the concentration of economic power in the hands of small groups; the scarcity of resources for large-scale development plans and shortage of technical personnel; the conflicting claims of industrial development and the immediate improvement of the standard of living of the people; the incompatibility of some of the measures which might be considered necessary for development with the obligations arising out of membership of various international bodies; and the demands of national security.

In conclusion, the report recommended concerted and co-operative action between various national or territorial units to overcome some of the difficulties common to all Asiatic countries.

It must not, however, be forgotten that no measures, national or international, will have any permanent effect unless the population problem is successfully tackled. This can be done only by the peoples themselves. This summary returns, therefore, to its starting point. The modernisation of the countries of South and East Asia is the prerequisite for the improvement in their standards of living. A rapid and considerable growth in population is indeed unavoidable. It has been suggested that :

Such an epoch of growth could be terminated in two ways. If the essentials of the existing agrarian society are maintained, there is every prospect that growth will continue until the potentialities for increased production are exhausted. Then it will be checked by repeated catastrophes and generally increased mortality. In this case, however, large and poverty-stricken populations would be left with the potentiality for a new cycle of growth any time circumstances permitted.

If, on the other hand, a period of peace, order and rapidly rising production were to be accompanied by a thorough and balanced modernisation, we would expect the same or even faster immediate growth but a different termination. If such developments brought urbanisation, industrialisation, rising levels of living, popular education and popular participation in political life, the same forces that eventually induced a declining fertility in the West would probably come into play. The population would then undergo transitional growth, perhaps tripling in the process. If events marched swiftly and studied efforts were made to induce declining fertility, perhaps only a doubling of present population would be involved.

In sober fact, each of these alternatives probably will exist in one place or another. Chaotic political and economic conditions probably will check growth in some areas for a considerable time. In other areas, rapid growth will probably be terminated by a series of catastrophes, while fertility remains unchecked. In some instances—many, one hopes—wise and vigorous leadership may bring growth to an end through the reduction of fertility. To be achieved, this last alternative will require a tremendous increase in production, an increase that, in spite of rapid growth, can bring rising levels of living and new vistas of health and individual welfare to the world's most poverty-stricken peoples.¹

The success of such a programme for raising living standards in South and East Asia would depend on the manner in which the development plans were carried out. Economic development in all its aspects is generally accepted as the means of raising the living standards of the people of the countries concerned. However, as the experience of the Chinese and Indian traditional industries shows, the mere substitution of more efficient for less efficient methods of production is not enough. Labour might become even more redundant than before. If consumers' demand increased only very slightly, there would be a widespread increase in unemployment with no rise in average living standards. There might be a rise in the real income of those actually employed, but the pressure of the un-

¹ Frank W. NOTESTEIN: "Population—The Long View", in *Food for the World*, edited by Theodore W. SCHULTZ (Chicago, University of Chicago Press, 1945), p. 52.

employed combined with the lack of any effective organisation might nullify even this rise. If, on the other hand, full and efficient use were made of the resources released from existing production as a result of more efficient methods of production, there would be a substantial increase in average living standards, with the abolition of unemployment, whether disguised or apparent, and with all workers engaged in occupations in which they could be most productive. Rapid and extensive industrialisation is a prerequisite of a successful all-round increase in real wages; and rapidity and extensiveness are as important as the industrialisation itself.

The history of the process of industrialisation in most areas provides a vivid illustration of this necessity. Large-scale industrialisation has the immediate effect of throwing out of employment large numbers of workers who were previously employed under less efficient conditions of production, as for example, in handicraft industries. The extent of such displacement may be reduced by the introduction into small-scale industries of the simpler forms of power-driven tools and other techniques designed to raise efficiency and reduce costs; but the displacement of labour is nonetheless bound to be considerable. The speed with which these workers can be re-employed in new industries depends on the enterprise and efficiency of the financial and industrial organisation which forms the basis of the economy in question. If there are enough investment opportunities to absorb the growing savings of the increasingly wealthy community; if there is enough confidence to induce a sufficient number of investors and entrepreneurs to take advantage of these opportunities; if these entrepreneurs can be supplied with necessary working capital; if workers and other resources of production are sufficiently adaptable and mobile to meet the needs of the new types of production: then industrialisation and the raising of living standards will make rapid progress with but little unemployment. Because of deficiencies in most of these directions, industrialisation, though bringing about increases in living standards in the end, was in the past accompanied by great temporary hardships and disorganisation. The case of the handloom weavers in England in the 1840's is well-known. An illustration of the magnitude of the problem in the East is provided by the Indian cotton weaving industry, where the value

of output per worker engaged in large-scale modern mills is estimated to be 14 times as large as that of an average hand-weaver. During the 30 years from 1901 to 1931—a period in which there was a great increase in output—the number of workers employed in modern cotton spinning and weaving mills rose from 172,900 to 395,500, while the number of persons engaged in the handloom industry fell from 3.3 million to 2.1 million. By 1938-39, the handloom industry, though it still employed 85 per cent. of the total number of workers engaged in the manufacture of cotton textiles, accounted for only 30 per cent. of India's total production of cotton cloth.

Here, then, is a typical situation. Simultaneously with an enormous increase in output, industrialisation in this case released nearly one million workers. If all that could be done with such displaced workers were to be to leave them unemployed, then there would indeed be a problem of surplus population in Asiatic countries. If, however, they could be used to build the roads, railways, irrigation systems, factories, machinery, and so on that are vital to the further progress of industrialisation, the living standards in these countries could be progressively raised.

If this objective is to be achieved, it is essential that the Governments of the countries concerned should maintain a continuous and close review of the progress of economic development. They alone, with the consistent support of the people for the far-reaching social changes involved, can formulate the plans for economic development and adapt them from time to time in such a way as to minimise the incidence of unemployment and ensure a steady rise in living standards.

APPENDIX

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